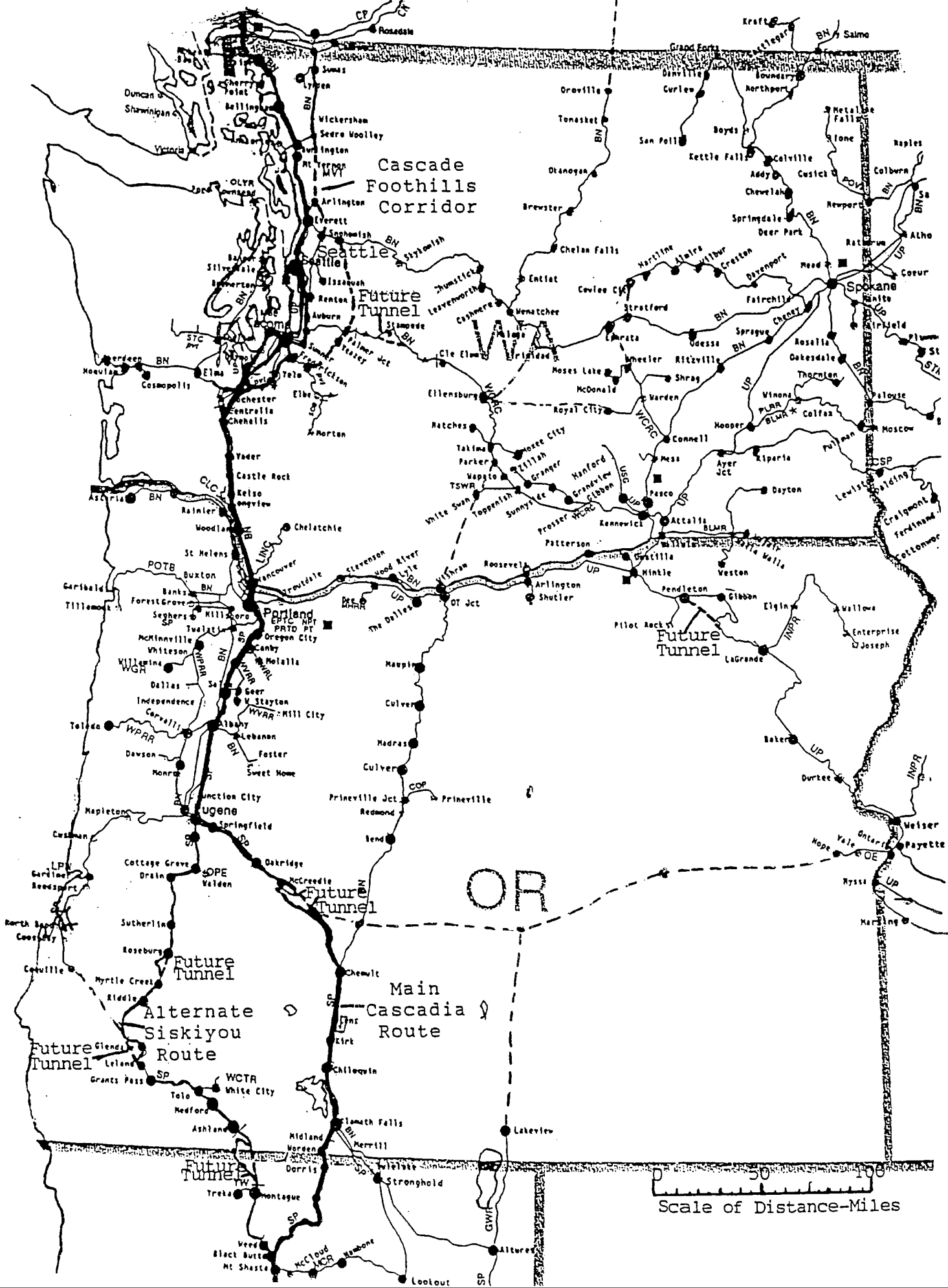
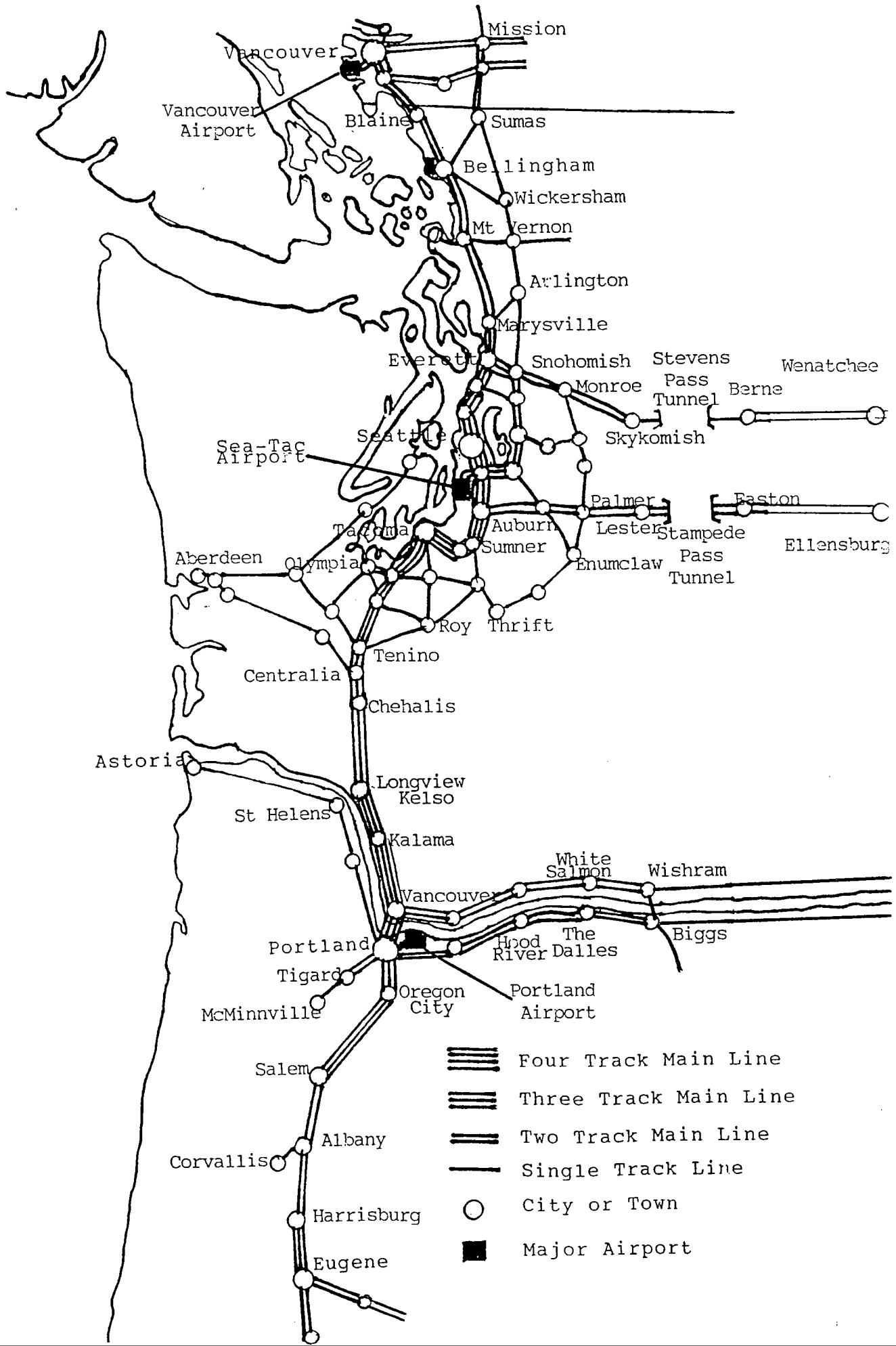
PROPOSED HIGH SPEED RAIL TRANSPORT CORRIDOR IN OREGON AND WASHINGTON



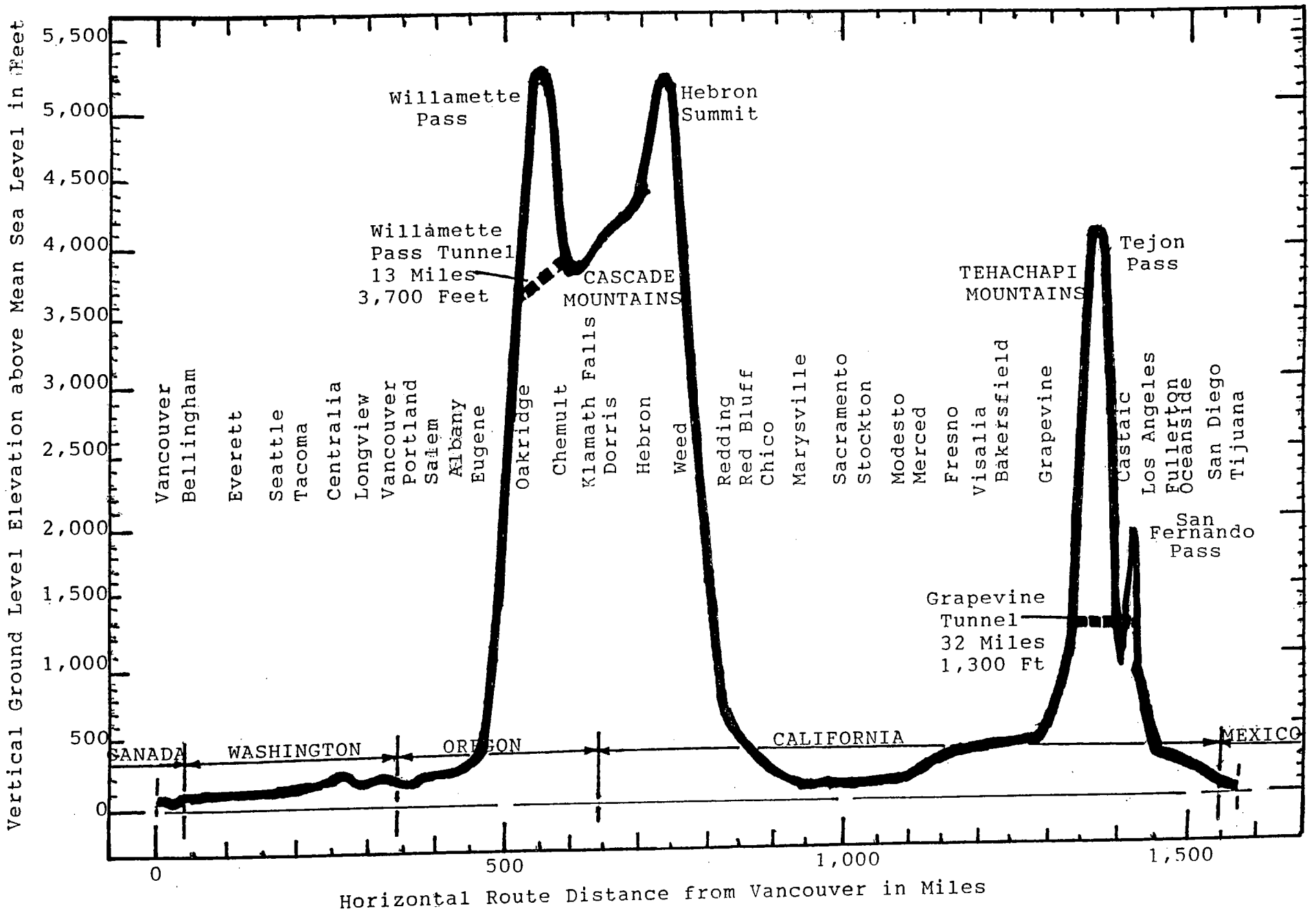
TRACK CONFIGURATION REQUIREMENTS FOR THE PACIFIC NORTHWEST RAIL CORRIDOR.



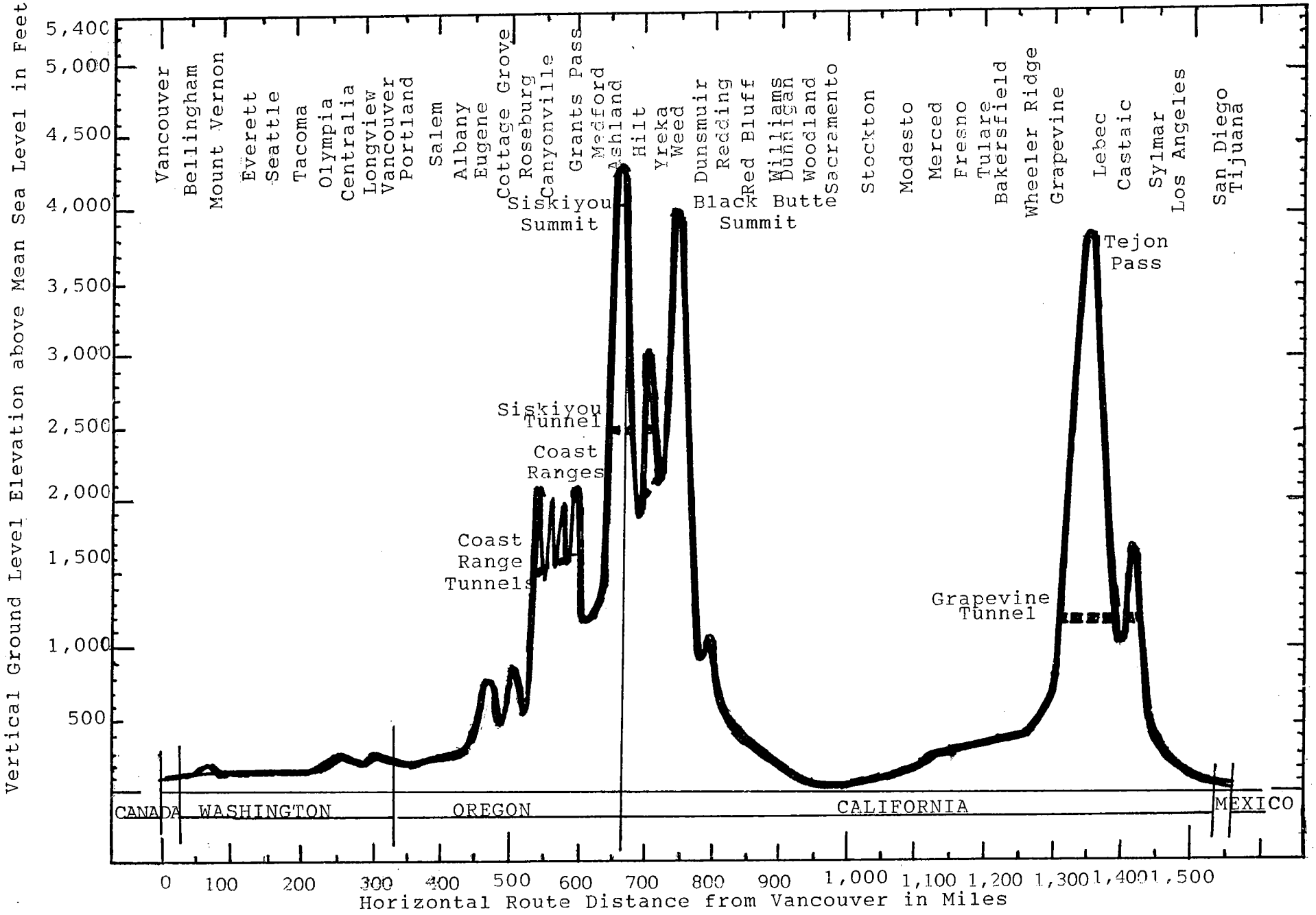
WEST COAST RAILROAD

ELEVATION PROFILES

VERTICAL ELEVATION PROFILE CONFIGURATION OF THE WEST COAST RAILROAD LINE CORRIDOR FROM VANCOUVER, BRITISH COLUMBIA TO TIJUANA, BAJA CALIFORNIA VIA WASHINGTON, OREGON & CALIFORNIA



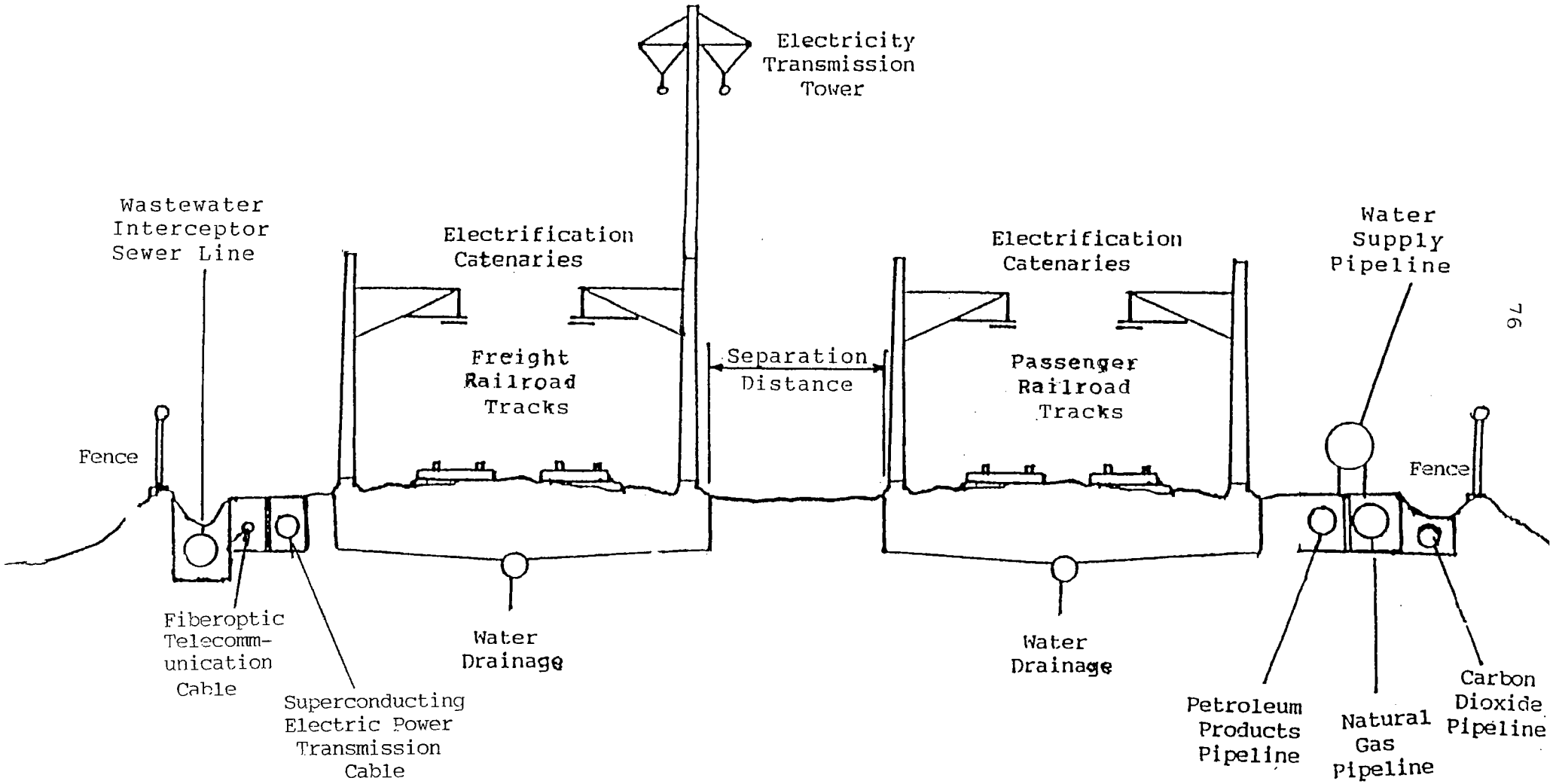
VERTICAL ELEVATION PROFILE CONFIGURATION OF THE PROPOSED WEST COAST RAILROAD LINE ROUTE ALONG THE INTERSTATE 5 FREEWAY CORRIDOR FROM VANCOUVER, BRITISH COLUMBIA, CANADA TO THE TIJUANA, BAJA CALIFORNIA, MEXICO THROUGH THE STATES OF WASHINGTON, OREGON AND CALIFORNIA



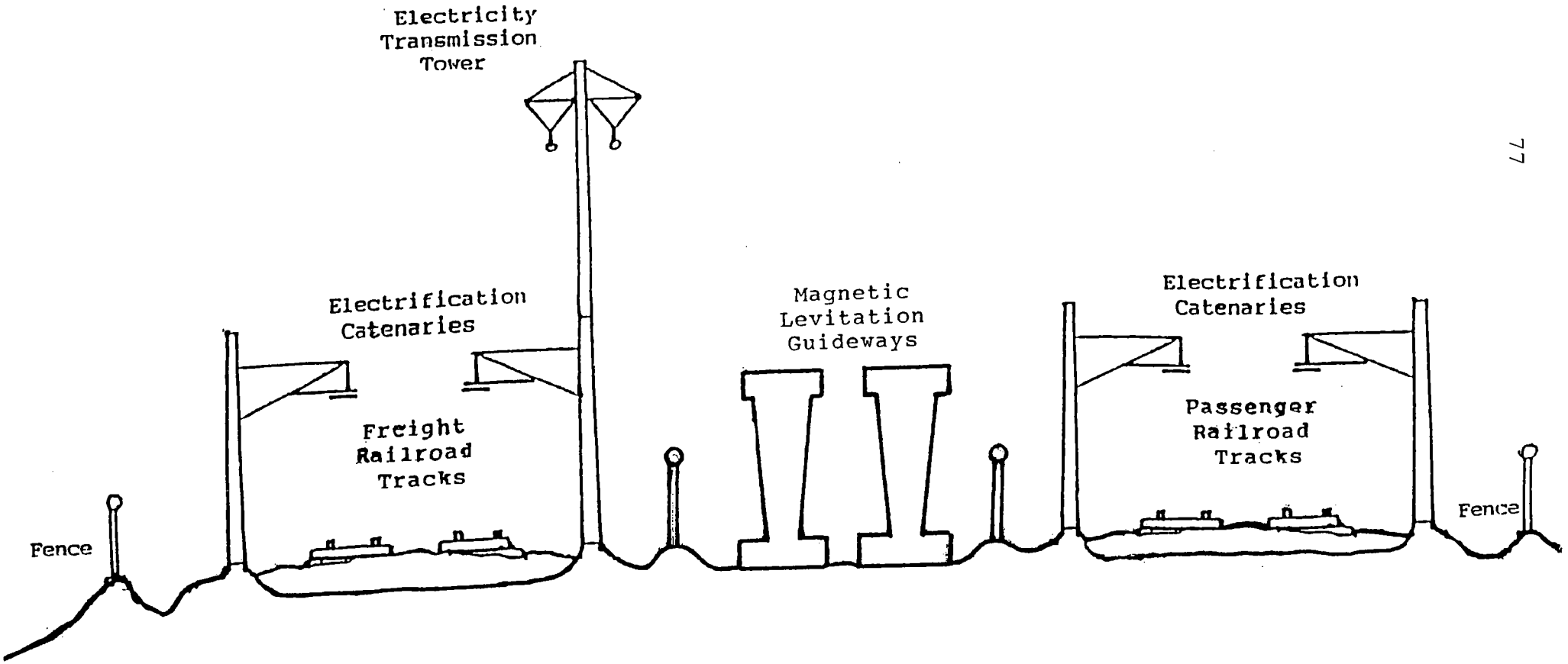
WEST COAST RAILROAD

CROSS SECTION PROFILES

CROSS-SECTIONAL VERTICAL PROFILE OF THE COMBINED HIGH SPEED PASSENGER AND FREIGHT RAILROAD LINE ALONG THE INTERSTATE 5 CORRIDOR BETWEEN THE STATES OF WASHINGTON, OREGON AND CALIFORNIA



VERTICAL CROSS SECTIONAL PROFILE OF THE INTEGRATED HIGH SPEED PASSENGER AND FREIGHT RAIL LINE CORRIDOR ALONG THE WEST COAST IN PARALLEL TO THE INTERSTATE 5 FREEWAY IN THE STATES OF WASHINGTON, OREGON AND CALIFORNIA FROM VANCOUVER, BRITISH COLUMBIA TO TIJUANA, MEXICO



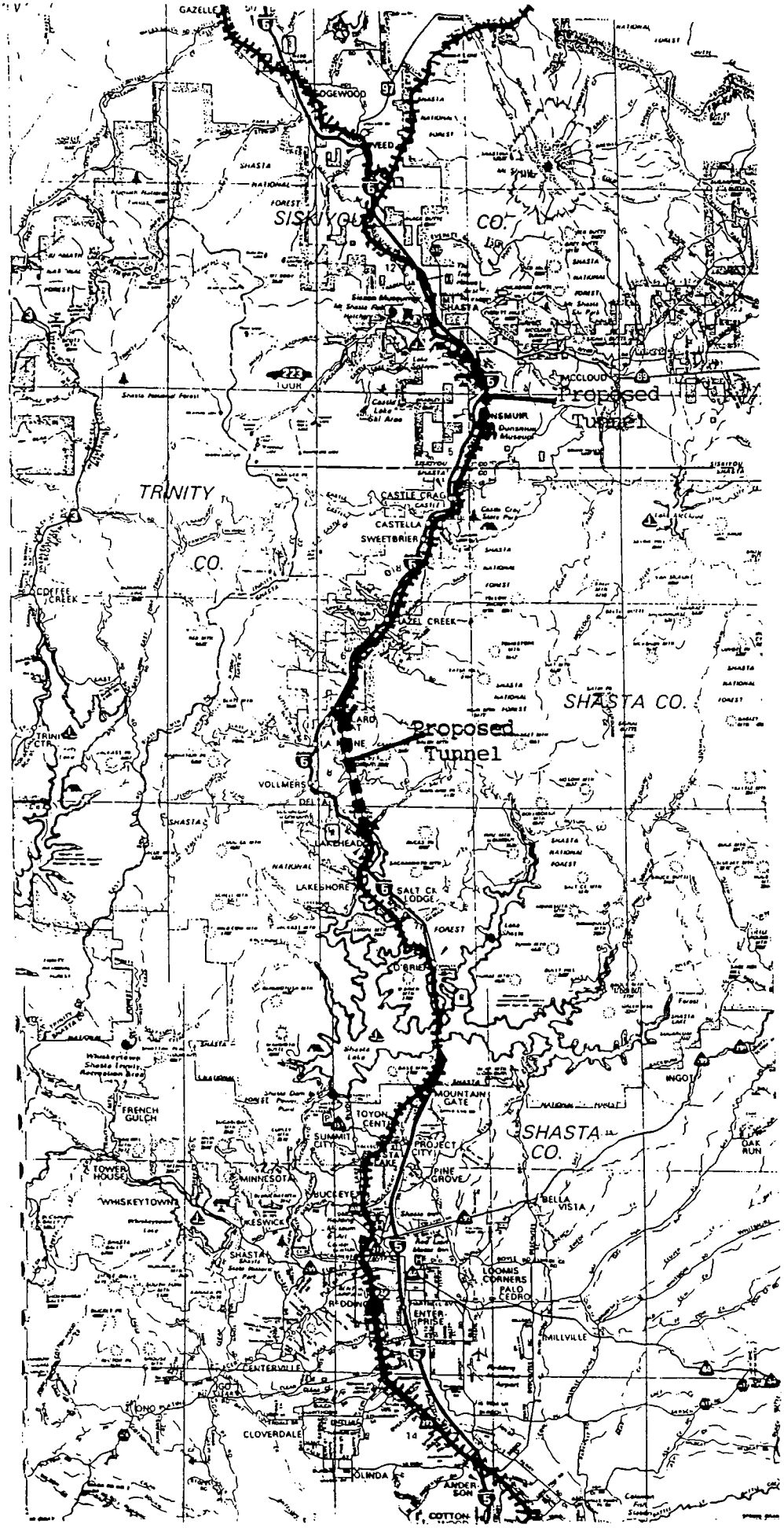
WEST COAST RAILROAD

INFRASTRUCTURE PROJECTS

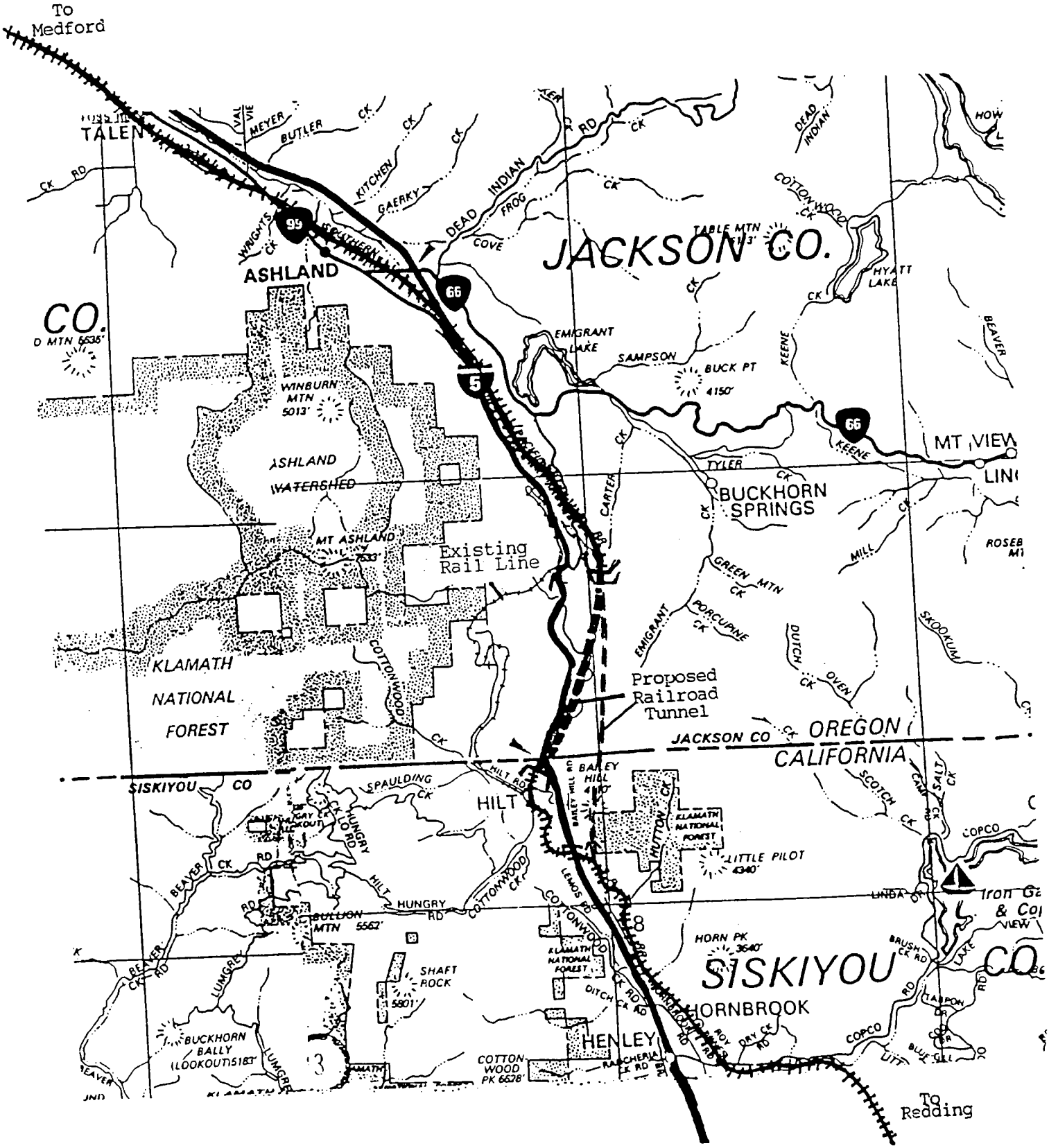
SUMMARY FEATURES OF THE STEPWISE PHASED IMPLEMENTATION PLAN FOR INCREMENTAL IMPROVEMENTS IN THE WESTERN & EASTERN WASHINGTON INTERCITY CORRIDORS TO ALLEVIATE THE RUNWAY CAPACITY CONSTRAINTS AT SEA-TAC AIRPORT

Time Frame	Western Washington Corridor Portland-Seattle-Vancouver	Eastern Washington Corridor Seattle-Spokane & Eastern Washington	Northern California Corridor Southern California Corridor
1996-2000	Buy 4 New Trainsets for Service Build Tukwila Station for Sea-Tac Airport Construct Prarie Line Bypass Line Start Bellevue-Tukwila Line Upgrade Bellevue-Tukwila Line Make Signal & Track Improvements Start Nonstop Train Service from Seattle to Portland via Tukwila Start Bellevue-Portland Service	Start up Stampede Pass Line for Freight Start Sea-Tac Passenger Service for Wenatchee Start up Stampede Pass Line for Passengers Make signal & track improvements on Line Start Yakima River Canyon Line Start construction of Ellensburg-Lind Line Start double-tracking of Lind-Spokane Line Start Seattle-Ellensburge-Yakima Service Start Sea-Tac Airport Rail Connector Construction	Start second Coast Starlight Train via Klamath Falls Begin second Track Construction in Willamette Valley Upgrade Existing Trackage from Bend to Klamath Falls Begin Upgrading of Siskiyou Line from Eugene to Ashland Add second track to Rosevalde-Redding Main Line Upgrade Existing Coast Line from San Jose to Glendale
2000-2005	Buy 4 Additional Trainsets Upgrade Bellevue-Tukwila Line Construct Olympia Connector Line Make Signal & Track Improvements Start Upgrade Bellevue-Snohomish Line for Vancouver Service Start Third Main Track on Seattle to Portland Corridor Line Start Double Tracking of Seattle to Vancouver Corridor Line Start Bellevue Main Terminal Nonstop Seattle-Vancouver Service	Complete construction of Ellensburg-Lind Line Complete construction of Stevens Pass Improvement Start construction of Stampede Pass new Tunnel Upgrade signals for Auburn-Lind-Spokane Line Double-track Stampede Pass access lines Start construction of Renton-Maple Valley Bypass Line Complete construction of Lind-Pasco-Moses Lake Line Complete renovation of Stevens Pass Line Start Seattle-Yakima-Pasco Rail Line Service Complete Sea-Tac Airport Rail Connector Construction Begin Improvements to Idaho and Montana Rail Line	Upgrade Willamette Pass Line Eugene to Chenult Upgrade and Rebuild Sacramento Canyon Line Add second track to Klamath Falls-Weed Line Begin Construction of Siskiyou Mountain Tunnel Begin Construction of Tehachapi Mountain Tunnel Add second track through San Joaquin Valley Line
2005-2010	Buy 4 Additional Trainsets Construct Lake Samish Bypass Line Rebuild Eastside Rail Line Start Sea-Tac Airport Connector Complete Third Main Track from Seattle to Portland Corridor Complete Double Tracking of the Seattle to Vancouver Corridor Expand Track and Signal Upgrading Expand Nonstop Train Services Start Eastside Railroad Tunnel	Add second main track to Ellensburg & Lind Add second Main Track to Moses Lake-Lind-Pasco Line Start direct rail service from Sea-Tac Airport to Moses Lake Airport and Spokane Airport Complete construction of Stampede Pass Tunnel Start rail passenger service to Pullman Extend rail passenger service to Coeur d'Alene, Sandpoint, Bonners Ferry and Whitefish. Continue improvements to Idaho and Montana Rail Line Complete construction of Renton-Maple Valley Bypass Line	Complete Reconstruction of Siskiyou Line Route Complete Construction of Sacramento Canyon Line Complete Construction of Siskiyou Mountain Tunnel Complete Construction of Tehachapi Mountain Tunnel Complete Reconstruction of the Coast Line Route
2010-2020	Full High Speed Rail Operation 150 miles/hour for Passenger Service 90 miles/hour for Freight Service	Increase to Full High Speed Rail Operation 185 miles/hour for Passenger Service 90 miles/hour for Freight Service	Increase to Full High Speed Rail Operation 180 miles/hour for Passenger Service 90 miles/hour for Freight Service

PROPOSED RAILROAD LINE ROUTING THROUGH THE SACRAMENTO RIVER CANYON



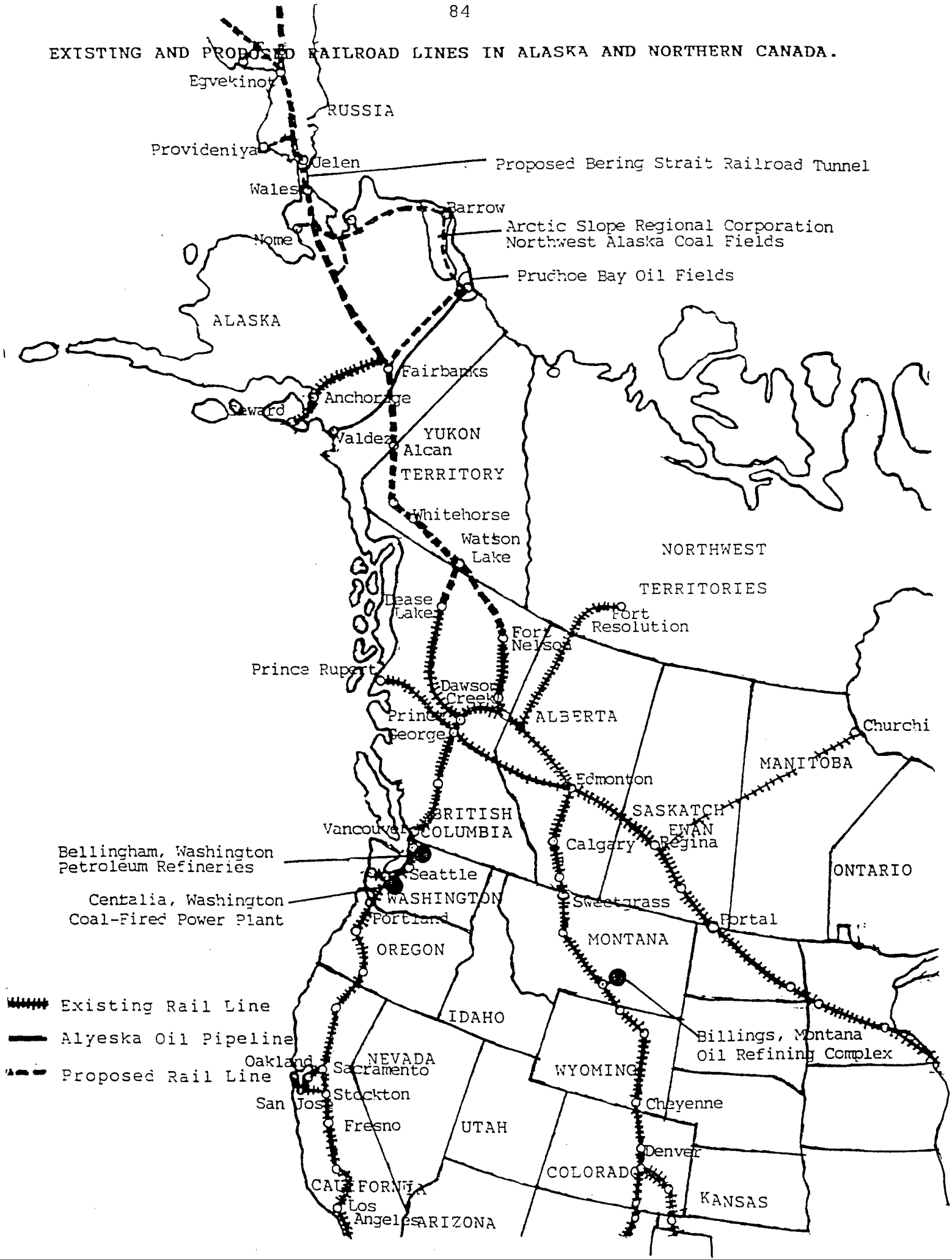
LOCATION OF THE PROPOSED RAILROAD TUNNEL THROUGH THE SISKIYOU MOUNTAINS.



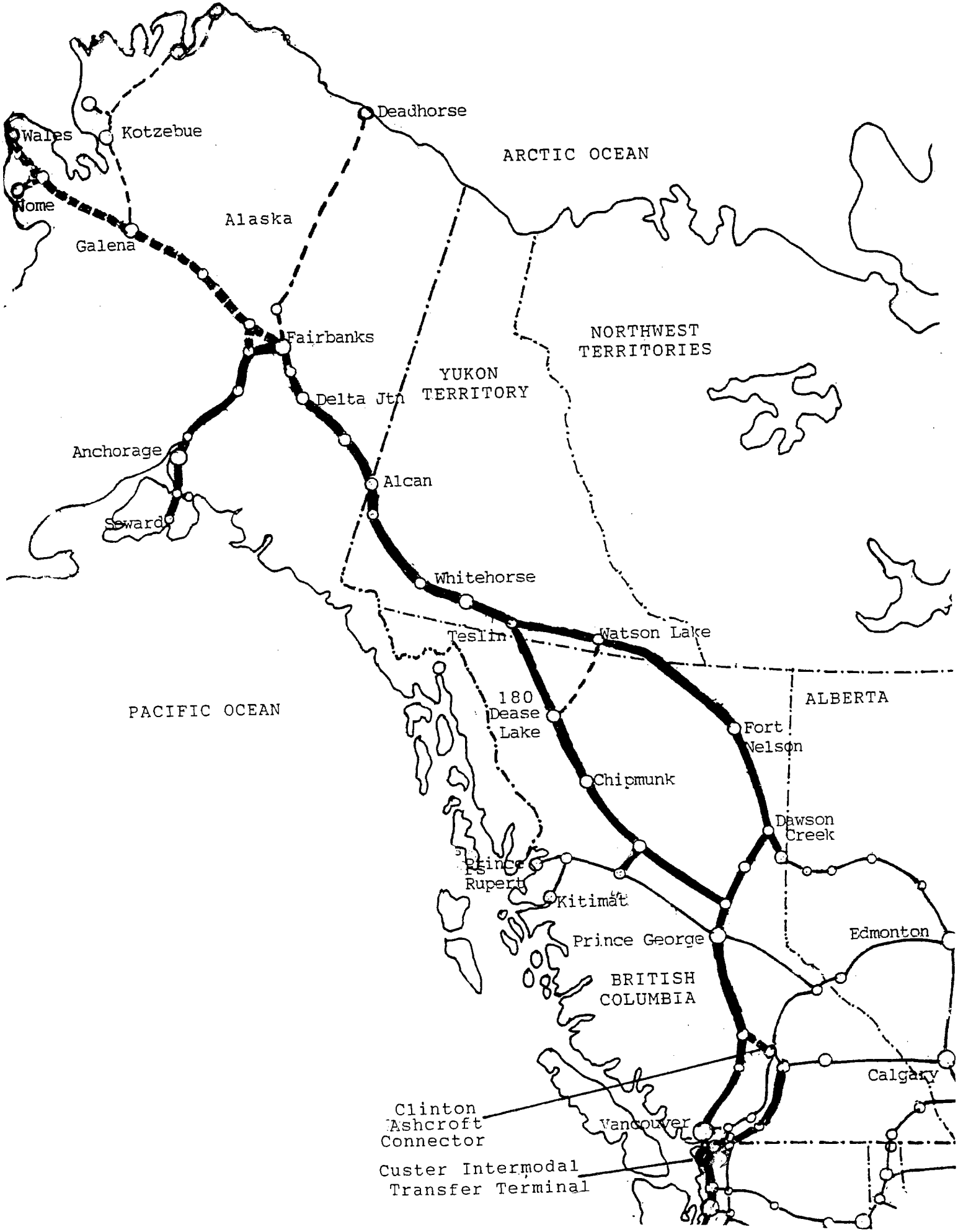
ALASKA CANADA

RAILROAD EXTENSIONS

EXISTING AND PROPOSED RAILROAD LINES IN ALASKA AND NORTHERN CANADA.



PROPOSED ROUTE OF THE CANADIAN ARCTIC RAILWAY FROM CUSTER TO FAIRBANKS



O008
Attachment 3

GRAPEVINE GRADE

CALIFORNIA TUNNEL PROJECT

ECONOMIC ANALYSIS

Date: August, 10, 2003

Prepared For: Dr. Hal B.H. Cooper, Jr.
President
Cooper Energy and Fertilizer Company
11715 – NE 145th Street
Kirkland, Washington 98034

Prepared By: Ronald E. Rafter
Director
China Distribution & Development Co. Inc.
20208 – 42 NE
Seattle, Washington 98155

GRAPEVINE GRADE TUNNEL PROJECT

Table of Contents:

Grapevine Grade Tunnel Project

I. Assumptions

The cash flows for the economic analysis of this project were based on a series of assumptions as follows:

1. The budgeted capital expenditure was based on a projected cost of Construction of $3,234.500 broken down as follows:

   a. Tunnel costs at $100,000,000 per mile for 32 miles double track under under the Grapevine Grade. $3,200,000.000.

   b. Infrastructure cost for two Intermodal terminals: $10,000,000

   c. Two Intermodal terminals: $10,000,000

   d. Equipment for two Intermodal terminals: $2,000,000

   e. Two truck stop buildings and equipment: $3,000,000

   f. Four 100,000 sq. ft. Warehouse buildings located two at each terminal: $8,000,000

   g. Contingency: $1,500,000

2. Debt servicing based on a 30 year amortization of principal and interest. (1) Alternative A – 6% standard loan; (2) Alternative B – 3% subsidized loan.

3. Operating costs based on $25,000 per mile of track per year. 32 miles of double track.

4. Utilization factors based upon 20,000 trucks per day through the corridor.

5. Passenger trains forecast at 100 trains per day through the corridor.

6. Capitalized interest cost in the five year construction period:
   6% - $485,175,000
   3% - $242,587,500

7. The utilization assumptions for 10%, 15%, 20% and 25% were based on the ability of the tunnel operators and authority to capture certain percentages of the existing truck traffic over the Grapevine Grade under current conditions. The utilization assumptions for 50% and 75% were based on legal statues banning trucks or a percentage of truck operators from using the highway corridor due to the high costs in California to maintain the highway and preserve the highway corridor from continued damage and maintenance costs.

Grapevine Grade Tunnel Project

II. Conclusion

Cooper Energy and Fertilizer Company proposes to construct a 32 mile double track railroad tunnel under the "Grapevine Grade" section of the I-5 corridor linking the existing rail lines between Los Angeles, San Fernando, Castaic and Bakersfield. The tunnel would support Intermodal truck freight and high speed passenger trains. The intermodal services would be supported by two truck terminals and truck stop facilities on each side of the tunnel located in San Fernando and Bakersfield. It is the conclusion of Ronald E. Rafter, Director of China Distribution & Development Co. Inc. and author of this economic analysis that the Grapevine Grade Tunnel Project can be a very viable and sustainable project but this will require certain percentages of utilization from trucks currently using the I-5 highway through the corridor and minimum fees from trucks and passenger trains using the proposed tunnel.

The Grapevine Grade Tunnel Project is a cost sensitive project with limited upgrading of revenues from truck fees and passenger trains. At a 6% interest rate the net revenues after tax produce marginal debt servicing capabilities until the project receives 25% utilization with truck fees of $140/truck and $7,000/passenger train. The cash flows from 3% financing combined with truck fees of $120/truck at 15% utilization and $6,000/passenger train demonstrates the profitability potential and adequacy of debt servicing. This is the minimum level and any other combinations of higher utilization and/or fees with 3% subsidized loans increases the profitability potential for the project.

With some forms of subsidized loans and/or government mandated useage of the Grapevine Grade Tunnel from the State of California changes the numbers significantly and increases profitability potential to greater levels of debt servicing coverage acceptable to lenders and investors alike. Mandated useage levels of 50% and 75% create very acceptable levels of debt servicing coverage for both 3% loan costs and 6% loan costs. Subsidized loans and mandated useage are both items that the State of California should consider fully for this project. It is estimated that every truck using the existing I-5 highway through the corridor costs the State of California $25 for maintenance and damage repair to the highway. This relates to an

expense of over $182,500,000 per annum to the California taxpayers. A good portion of this cost would be saved by trucks substituting the intermodal rail useage rather than the highway corridor.

Grapevine Grade Tunnel Project

III. Narrative of Analysis

The Grapevine Grade Tunnel Project proposes to construct a 32 mile double track railroad tunnel under the Grapevine Grade corridor of the I-5 highway linking Los Angeles, San Fernando and Bakersfield. The rail corridor would provide intermodal movement of truck freight by rail along the 120 mile corridor between Los Angeles and Bakersfield, California. Additionally, the rail corridor would provide high speed passenger trains linking northern and southern California. The project would provide a more efficient movement of freight and people through the corridor while reducing the heavy volume of trucks and automobiles presently restricted to the I-5 highway and the delays caused by the existing Grapevine Grade. Additionally, the project would reduce the maintenance and repair costs associated with the truck and automobile traffic presently using this corridor. The project would provide for two intermodal terminals and truck stops on each end of the tunnel to be located in San Fernando and Bakersfield. The intermodal terminals would load and unload the truck tractors and trailers and the truck stops would provide full services for the truck operators and their equipment.

The purpose of this analysis is to determine the revenue from intermodal truck fees and passenger train required to amortize the debt and provide for a fair internal rate of return for investment risk. The truck fee in particular has to be priced competitively in order to attract truck freight users who presently travel the corridor via highway. It is estimated that it costs truck operators $1.25 per mile to operate a class 8 vehicle with trailer. Consequently, the 120 mile distance between Los Angeles and Bakersfield would cost truckers approximately $150 per trip. The intermodal method of moving the truck tractor, trailer and driver will have to compete with the actual costs of moving the same load via highway. An additional factor to consider is that the movement of truck freight via intermodal rail service is faster, causes less stress and is more efficient than highway useage. It is also important to incorporate the value of speedy movement of cargo in and out of the primary Southern California ports of San Pedro and Los Angeles. Delays in the movement of cargo in and out of these ports has cost importers and exporters millions of dollars per year and the traffic volumes that persist on the inadequate surface transportation system is a major contributor to this

cost. Additionally, the cost to the State of California to maintain and repair their surface transportation systems is enormous. It is estimated that every truck using the Grapevine Grade corridor costs the State $25 or $182,500,000 per annum.

It is important to remember that when dealing with longer term infrastructure projects such as the "Grapevine Grade Tunnel Project" that debt servicing adequacy is measured in terms of "coverage". Coverage is the ratio between the funds available from cash flow for the payment of debt and the actual amortization requirements for principal and interest. Industry standards for infrastructure projects consider coverage of 1.4x (times) or above adequate for debt servicing and consequently project loan approval.

For the Grapevine Grade Tunnel Project we looked at the utilization of existing truck traffic on the existing corridor which is approximately 20,000 units per day, a fee for the intermodal service and a fee for high speed passenger trains using the rail link. Additionally, a much higher utilization factor assuming a legal useage mandate would be issued by the State of California requiring truck operators to use the rail corridor in order to greatlt reduce present State outlays for maintenance and repair. The scenarios that were used consist of:

1. Utilizations of truck traffic of 10%, 15%, 20% and 25% with a fee of $100 and Passenger Train of $5,000.
2. Utilizations of truck traffic of 10%, 15%, 20% and 25% with a fee of $120 and Passenger Train of $6,000.
3. Utilizations of truck traffic of 10%, 15%, 20% and 25% with a fee of $140 and Passenger Train of $7,000.
4. Utilizations of truck traffic of 10%, 15%, 20%, 25%, 50% and 75% with a fee of $140 and Passenger Train of $7,000.

The pricing was then matched to the costs to operate and also includes the revenues and costs of operating two intermodal facilities and truck stops. The results were then matched to the two debt servicing alternatives used in the assumptions to show debt servicing adequacy for each price and utilization alternative.

(1) Using the initial assumptions of truck fees at $100 per truck and passenger trains at $5,000 per train we find only marginal results and limited debt servicing capability. The only two scenarios that generate acceptable albeit limited coverage require subsidized funding with an interest rate of 3%. The standard loan with a 6% interest generates no acceptable coverage levels.

3% subsidized financing produces a net profit after tax at all levels of utilization but limited coverage. The results are as follows:

Utilization:	10%	15%	20%	25%
Net Profit:	$30.8MM	$56.3MM	$81.8MM	$107.3MM
Coverage:	1.13x	1.28x	1.42x	1.57x

With a 25% utilization of truck traffic through the corridor the project creates an acceptable coverage level but, in the opinion of the author, does not represent a level high enough or consistent with the risk of the investment or potential return to investor.

The 6% standard loan with these scenarios produces no level of income or coverage acceptable and can not be considered as a viable alternative. The results show losses at the lowest three levels of utilization and only a small profit at 25% which is indicated below.

Utilization:	10%	15%	20%	25%
Net Profit:	($74.6MM)	($38.2MM)	($1.8MM)	$24.2MM
Coverage:	0.79	0.93	1.06	1.16

The fees charged for the trucks and passenger trains using the rail link corridor are too low in this scenario for an adequate return on investment and can not demonstrate any ability to arrange financing for a project of this nature.

(2) The second scenario raises the truck fees to $120 per truck which is competitive with surface transportation costs over the corridor and raises the fees for passenger trains to $6,000 per train. Although the subsidized

loan alternative produces profits at all levels of utilization, it does not produce acceptable coverage of debt servicing until the utilization factor improves to 20% or higher. The chart as shown below indicates the levels of profitability and coverage. It is noted that the 6% standard loan does not produce a profit in the three lowest utilization scenarios and only a very marginal profit at 25% utilization. Coverage for debt servicing on the standard loan is inadequate at all levels.

3% subsidized financing produces the following with truck fees at $120/truck and passenger trains at $6,000/train.

Utilization:	10%	15%	20%	25%
Net Profit:	$59.1MM	$89.4MM	$119.8MM	$150.1MM
Coverage:	1.29	1.46	1.64	1.81

6% standard financing using the same assumptions produces the following:

Utilization:	10%	15%	20%	25%
Net Profit:	($34.3MM)	$9.1MM	$52.5MM	$67.1MM
Coverage:	0.94	1.11	1.27	1.32

Although the standard financing alternative begins to make a small profit in this scenario it does not produce an adequate debt servicing coverage in any scenario and is not financially viable. The subsidized financing alternative is financially viable with coverages of 1.64 and 1.81; if the operators could achieve the utilizations required to produce these results the project would be satisfactory but only due to a subsidy to keep net interest costs at the level assumed.

(3) The third scenario raises the fees to a level of $140 per truck using the rail link and $7,000 per passenger train on the same corridor. We have seen in scenario's 1 and 2 that financial viability is virtually impossible using a standard loan and only possible in the highest two levels of utilization requiring a loan subsidy. At $140 per truck and $7,000 per passenger train the operators are approaching fee levels that may cause users to look for alternatives to move their freight and passengers through the corridor.

At this level of fees the 3% subsidized loan program is profitable at all levels of utilization and coverage is also adequate at all levels of utilization. The 6% standard loan program is also profitable at all levels of utilization but debt servicing coverage only meets minimum industry standards in the two highest utilization factors of 20% and 25%. The table below shows the profitability and coverages at the various utilization factors using the fee scheduled as outlined above.

3% Subsidized Financing:

Utilization:	10%	15%	20%	25%
Net Profit:	$87.2MM	$122.5MM	$157.8MM	$193.1MM
Coverage:	1.45	1.65	1.85	2.05

6% Standard Financing:

Utilization:	10%	15%	20%	25%
Net Profit:	$5.9MM	$56.4MM	$106.8MM	$110.0MM
Coverage:	1.09	1.28	1.47	1.48

The above table indicates that with subsidized financing the operator could produce results that would be acceptable to lenders/investors particularly at the higher utilization factors of 20% and 25%. The question arises that can the operator achieve the fee levels required, the utilizations required at the higher levels and the subsidy itself. These questions would need to be answered and demonstrated prior to lender/investor participation.

The standard financing alternative continues to struggle even at the highest of the three fee scenarios although it produces adequate profitability and coverage at the higher utilization factors of 20% and 25%. The lender/investor would certainly be looking at the operators feasibility of obtaining these utilization levels.

(4) The 4th fee scenario keeps the fee levels for trucks and passenger trains at the same level as scenario three which is $140 per truck and $7,000 per passenger train. This scenario does, however, make a dramatic utilization assumption which increases the utilization level from a top of

25% to levels of 50% and 75%. Utilization levels this high can only be reached by mandate or legal regulations from the State of California. As we have indicated each truck using the Los Angeles – Bakersfield corridor costs the State of California $25 per trip. This cost is in damage to the highway and highway maintenance. Annually this costs exceeds $182,500,000 and paid from the State's highway budgets and reserves. In a period where the State of California is running approximately $40,000,000,000 deficits the mandated utilization, although unlikely, could be used as a cost saving alternative.

The mandated higher utilizations make dramatic changes to the project cash flow and certainly make both subsidized financing or standard loans profitable at these levels with more than adequate debt servicing coverage. Looking at the table below we find:

3% Subsidized Loan

Utilization:	50%	75%
Net Profit:	$412.5MM	$589.1MM
Coverage:	3.30	4.30

6% Standard Loan

Utilization:	50%	75%
Net Profit:	$329.5MM	$505.9MM
Coverage:	2.30	2.96

Mandated regulations moving truck operators off of the highways in the State of California, in particular the I-5 Grapevine Grade corridor, and onto rail link intermodal services remains unlikely, however the movement of the State to push truck operators into intermodal rail links certainly would attract the investors/lenders to the various projects. This could be the most efficient and less costly form of the movement of freight and passengers in the future of the United States.

Grapevine Hill
Tunnel Project
Cash Flow Analysis $US

		Utilization of Truck Traffic			
		10%	15%	20%	25%
Alternative A - Subsidized Loan at 3% Interest Rate					
Operating Profit		$ 293,259,500	$ 343,684,250	$ 394,109,000	$ 444,533,750
Depreciation		$ 65,150,000	$ 65,150,000	$ 65,150,000	$ 65,150,000
Interest Expense (1st Year)		$ 103,500,009	$ 103,500,009	$ 103,500,009	$ 103,500,009
Profit Before Tax		$ 124,609,491	$ 175,034,241	$ 225,458,991	$ 275,883,741
Income Tax	30%	$ 37,382,847	$ 52,510,272	$ 67,637,697	$ 82,765,122
Net Profit		$ 87,226,644	$ 122,523,969	$ 157,821,294	$ 193,118,619
Add: Depreciation		$ 65,150,000	$ 65,150,000	$ 65,150,000	$ 65,150,000
Add: Interest Expense (1st Year)		$ 103,500,009	$ 103,500,009	$ 103,500,009	$ 103,500,009
Cash Flow Before Debt Service (1st Year)		$ 255,876,653	$ 291,173,978	$ 326,471,303	$ 361,768,628
Interest Expense (1st Year)		103,500,009	103,500,009	103,500,009	103,500,009
Principal Payment (1st Year)		$ 72,685,091	$ 72,685,091	$ 72,685,091	$ 72,685,091
Total Debt Service		176,185,100	176,185,100	176,185,100	176,185,100
Debt Coverage		1.45	1.65	1.85	2.05
Alternative B - Subsidized Loan at 6% Interest Rate					
Operating Profit		$ 293,259,500	$ 343,684,250	$ 394,109,000	$ 444,533,750
Depreciation		65,150,000	65,150,000	65,150,000	65,150,000
Interest Expense (1st Year)		$ 222,159,845	$ 222,159,845	$ 222,159,845	$ 222,159,845
Profit Before Tax		5,949,655	56,374,405	106,799,155	157,223,905
Income Tax	30%	-	-	-	$ 47,167,172
Net Profit		$ 5,949,655	$ 56,374,405	$ 106,799,155	$ 110,056,734
Add: Depreciation		$ 65,150,000	$ 65,150,000	$ 65,150,000	$ 65,150,000
Add: Interest Expense (1st Year)		$ 222,159,845	$ 222,159,845	$ 222,159,845	$ 222,159,845
Cash Flow Before Debt Service (1st Year)		$ 293,259,500	$ 343,684,250	$ 394,109,000	$ 397,366,578
Interest Expense (1st Year)		222,159,845	222,159,845	222,159,845	222,159,845
Principal Payment (1st Year)		$ 45,932,307	$ 45,932,307	$ 45,932,307	$ 45,932,307
Total Debt Service		268,092,152	268,092,152	268,092,152	268,092,152
Debt Coverage		1.09	1.28	1.47	1.48

Grapevine Hill
Tunnel Project
Cash Flow Analysis $US

			Utilization of Truck Traffic			
			10%	15%	20%	25%
Traffic Assumptions:						
Truck Traffic (number of trucks per year)	7,300,000		730,000	1,095,000	1,460,000	1,825,000
Passenger Trains			27,375	27,375	27,375	27,375
Revenue Assumptions:						
Revenue per Truck			$ 140	$ 140	$ 140	$ 140
Revenue per Passenger Train			$ 7,000	$ 7,000	$ 7,000	$ 7,000
Revenue:						
Trains:						
Intermodal Trains			$ 102,200,000	$ 153,300,000	$ 204,400,000	$ 255,500,000
Passenger Trains			$ 191,625,000	$ 191,625,000	$ 191,625,000	$ 191,625,000
Total Train Revenue			$ 293,825,000	$ 344,925,000	$ 396,025,000	$ 447,125,000
Truck Stop:						
Fuel	$ 7.50	per trk	$ 5,475,000	$ 8,212,500	$ 10,950,000	$ 13,687,500
Overnight Parking			$ 6,205,000	$ 6,205,000	$ 6,205,000	$ 6,205,000
Food, Showers, etc.			$ 9,125,000	$ 9,125,000	$ 9,125,000	$ 9,125,000
Warehouses			$ 1,920,000	$ 1,920,000	$ 1,920,000	$ 1,920,000
Total Truck Stop Revenue			$ 22,725,000	$ 25,462,500	$ 28,200,000	$ 30,937,500
Total Revenue			$ 316,550,000	$ 370,387,500	$ 424,225,000	$ 478,062,500
Expenses:						
Train:						
Operations			$ 1,600,000	$ 1,600,000	$ 1,600,000	$ 1,600,000
Administration		2.0%	$ 5,876,500	$ 6,898,500	$ 7,920,500	$ 8,942,500
Labor		2.0%	$ 5,876,500	$ 6,898,500	$ 7,920,500	$ 8,942,500
Total Train Expense			$ 13,353,000	$ 15,397,000	$ 17,441,000	$ 19,485,000
Truck Stop:						
Fuel	$ 3.75	per trk	$ 2,737,500	$ 4,106,250	$ 5,475,000	$ 6,843,750
Overnight Parking			$ 620,500	$ 620,500	$ 620,500	$ 620,500
Food, Showers, etc.			$ 6,387,500	$ 6,387,500	$ 6,387,500	$ 6,387,500
Warehouses			$ 192,000	$ 192,000	$ 192,000	$ 192,000
Total Truck Stop Expense			$ 9,937,500	$ 11,306,250	$ 12,675,000	$ 14,043,750
Total Expenses			$ 23,290,500	$ 26,703,250	$ 30,116,000	$ 33,528,750
Operating Profit			**$ 293,259,500**	**$ 343,684,250**	**$ 394,109,000**	**$ 444,533,750**

Grapevine Hill
Tunnel Project
Cash Flow Analysis $US

			Utilization of Truck Traffic			
			10%	15%	20%	25%
Traffic Assumptions:						
Truck Traffic (number of trucks per year)	7,300,000		730,000	1,095,000	1,460,000	1,825,000
Passenger Trains			27,375	27,375	27,375	27,375
Revenue Assumptions:						
Revenue per Truck			$ 120	$ 120	$ 120	$ 120
Revenue per Passenger Train			$ 6,000	$ 6,000	$ 6,000	$ 6,000
Revenue:						
Trains:						
Intermodal Trains			$ 87,600,000	$ 131,400,000	$ 175,200,000	$ 219,000,000
Passenger Trains			$ 164,250,000	$ 164,250,000	$ 164,250,000	$ 164,250,000
Total Train Revenue			$ 251,850,000	$ 295,650,000	$ 339,450,000	$ 383,250,000
Truck Stop:						
Fuel	$ 7.50	per trk	$ 5,475,000	$ 8,212,500	$ 10,950,000	$ 13,687,500
Overnight Parking			$ 6,205,000	$ 6,205,000	$ 6,205,000	$ 6,205,000
Food, Showers, etc.			$ 9,125,000	$ 9,125,000	$ 9,125,000	$ 9,125,000
Warehouses			$ 1,920,000	$ 1,920,000	$ 1,920,000	$ 1,920,000
Total Truck Stop Revenue			$ 22,725,000	$ 25,462,500	$ 28,200,000	$ 30,937,500
Total Revenue			$ 274,575,000	$ 321,112,500	$ 367,650,000	$ 414,187,500
Expenses:						
Train:						
Operations			$ 1,600,000	$ 1,600,000	$ 1,600,000	$ 1,600,000
Administration		2.0%	$ 5,037,000	$ 5,913,000	$ 6,789,000	$ 7,665,000
Labor		2.0%	$ 5,037,000	$ 5,913,000	$ 6,789,000	$ 7,665,000
Total Train Expense			$ 11,674,000	$ 13,426,000	$ 15,178,000	$ 16,930,000
Truck Stop:						
Fuel	$ 3.75	per trk	$ 2,737,500	$ 4,106,250	$ 5,475,000	$ 6,843,750
Overnight Parking			$ 620,500	$ 620,500	$ 620,500	$ 620,500
Food, Showers, etc.			$ 6,387,500	$ 6,387,500	$ 6,387,500	$ 6,387,500
Warehouses			$ 192,000	$ 192,000	$ 192,000	$ 192,000
Total Truck Stop Expense			$ 9,937,500	$ 11,306,250	$ 12,675,000	$ 14,043,750
Total Expenses			$ 21,611,500	$ 24,732,250	$ 27,853,000	$ 30,973,750
Operating Profit			**$ 252,963,500**	**$ 296,380,250**	**$ 339,797,000**	**$ 383,213,750**

Grapevine Hill
Tunnel Project
Cash Flow Analysis $US

		Utilization of Truck Traffic			
		10%	15%	20%	25%
Alternative A - Subsidized Loan at 3% Interest Rate					
Operating Profit		$ 252,963,500	$ 296,380,250	$ 339,797,000	$ 383,213,750
Depreciation		$ 65,150,000	$ 65,150,000	$ 65,150,000	$ 65,150,000
Interest Expense (1st Year)		$ 103,500,009	$ 103,500,009	$ 103,500,009	$ 103,500,009
Profit Before Tax		$ 84,313,491	$ 127,730,241	$ 171,146,991	$ 214,563,741
Income Tax	30%	$ 25,294,047	$ 38,319,072	$ 51,344,097	$ 64,369,122
Net Profit		$ 59,019,444	$ 89,411,169	$ 119,802,894	$ 150,194,619
Add: Depreciation		$ 65,150,000	$ 65,150,000	$ 65,150,000	$ 65,150,000
Add: Interest Expense (1st Year)		$ 103,500,009	$ 103,500,009	$ 103,500,009	$ 103,500,009
Cash Flow Before Debt Service (1st Year)		$ 227,669,453	$ 258,061,178	$ 288,452,903	$ 318,844,628
Interest Expense (1st Year)		103,500,009	103,500,009	103,500,009	103,500,009
Principal Payment (1st Year)		$ 72,685,091	$ 72,685,091	$ 72,685,091	$ 72,685,091
Total Debt Service		176,185,100	176,185,100	176,185,100	176,185,100
Debt Coverage		1.29	1.46	1.64	1.81
Alternative B - Subsidized Loan at 6% Interest Rate					
Operating Profit		$ 252,963,500	$ 296,380,250	$ 339,797,000	$ 383,213,750
Depreciation		65,150,000	65,150,000	65,150,000	65,150,000
Interest Expense (1st Year)		$ 222,159,845	$ 222,159,845	$ 222,159,845	$ 222,159,845
Profit Before Tax		(34,346,345)	9,070,405	52,487,155	95,903,905
Income Tax	30%	-	-	-	$ 28,771,172
Net Profit		$ (34,346,345)	$ 9,070,405	$ 52,487,155	$ 67,132,734
Add: Depreciation		$ 65,150,000	$ 65,150,000	$ 65,150,000	$ 65,150,000
Add: Interest Expense (1st Year)		$ 222,159,845	$ 222,159,845	$ 222,159,845	$ 222,159,845
Cash Flow Before Debt Service (1st Year)		$ 252,963,500	$ 296,380,250	$ 339,797,000	$ 354,442,578
Interest Expense (1st Year)		222,159,845	222,159,845	222,159,845	222,159,845
Principal Payment (1st Year)		$ 45,932,307	$ 45,932,307	$ 45,932,307	$ 45,932,307
Total Debt Service		268,092,152	268,092,152	268,092,152	268,092,152
Debt Coverage		0.94	1.11	1.27	1.32

Grapevine Grade Tunnel Project
Cash Flow Analysis $US

		Utilization of Truck Traffic					
		10%	15%	20%	25%	50%	75%
Traffic Assumptions:							
Truck Traffic (number of trucks per year)	7,300,000	730,000	1,095,000	1,460,000	1,825,000	3,650,000	5,475,000
Passenger Trains	100 /day	36,500	36,500	36,500	36,500	36,500	36,500
Revenue Assumptions:							
Revenue per Truck		$ 140	$ 140	$ 140	$ 140	$ 140	$ 140
Revenue per Passenger Train		$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000
Revenue:							
Trains:							
Intermodal Trains		$ 102,200,000	$ 153,300,000	$ 204,400,000	$ 255,500,000	$ 511,000,000	$ 766,500,000
Passenger Trains		$ 255,500,000	$ 255,500,000	$ 255,500,000	$ 255,500,000	$ 255,500,000	$ 255,500,000
Total Train Revenue		$ 357,700,000	$ 408,800,000	$ 459,900,000	$ 511,000,000	$ 766,500,000	$ 1,022,000,000
Truck Stop:							
Fuel	$ 7.50 per trk	$ 5,475,000	$ 8,212,500	$ 10,950,000	$ 13,687,500	$ 27,375,000	$ 41,062,500
Overnight Parking		$ 6,205,000	$ 6,205,000	$ 6,205,000	$ 6,205,000	$ 6,205,000	$ 6,205,000
Food, Showers, etc.		$ 9,125,000	$ 9,125,000	$ 9,125,000	$ 9,125,000	$ 9,125,000	$ 9,125,000
Warehouses		$ 1,920,000	$ 1,920,000	$ 1,920,000	$ 1,920,000	$ 1,920,000	$ 1,920,000
Total Truck Stop Revenue		$ 22,725,000	$ 25,462,500	$ 28,200,000	$ 30,937,500	$ 44,625,000	$ 58,312,500
Total Revenue		$ 380,425,000	$ 434,262,500	$ 488,100,000	$ 541,937,500	$ 811,125,000	$ 1,080,312,500
Expenses:							
Train:							
Operations		$ 1,600,000	$ 1,600,000	$ 1,600,000	$ 1,600,000	$ 1,600,000	$ 1,600,000
Administration	2.0%	$ 7,154,000	$ 8,176,000	$ 9,198,000	$ 10,220,000	$ 15,330,000	$ 20,440,000
Labor	2.0%	$ 7,154,000	$ 8,176,000	$ 9,198,000	$ 10,220,000	$ 15,330,000	$ 20,440,000
Total Train Expense		$ 15,908,000	$ 17,952,000	$ 19,996,000	$ 22,040,000	$ 32,260,000	$ 42,480,000
Truck Stop:							
Fuel	$ 3.75 per trk	$ 2,737,500	$ 4,106,250	$ 5,475,000	$ 6,843,750	$ 13,687,500	$ 20,531,250
Overnight Parking		$ 620,500	$ 620,500	$ 620,500	$ 620,500	$ 620,500	$ 620,500
Food, Showers, etc.		$ 6,387,500	$ 6,387,500	$ 6,387,500	$ 6,387,500	$ 6,387,500	$ 6,387,500
Warehouses		$ 192,000	$ 192,000	$ 192,000	$ 192,000	$ 192,000	$ 192,000
Total Truck Stop Expense		$ 9,937,500	$ 11,306,250	$ 12,675,000	$ 14,043,750	$ 20,887,500	$ 27,731,250
Total Expenses		$ 25,845,500	$ 29,258,250	$ 32,671,000	$ 36,083,750	$ 53,147,500	$ 70,211,250
Operating Profit		**$ 354,579,500**	**$ 405,004,250**	**$ 455,429,000**	**$ 505,853,750**	**$ 757,977,500**	**$ 1,010,101,250**

		Utilization of Truck Traffic					
		10%	15%	20%	25%	50%	75%
Alternative A - Subsidized Loan at 3% Interest Rate							
Operating Profit		$ 354,579,500	$ 405,004,250	$ 455,429,000	$ 505,853,750	$ 757,977,500	$ 1,010,101,250
Depreciation		$ 65,150,000	$ 65,150,000	$ 65,150,000	$ 65,150,000	$ 65,150,000	$ 65,150,000
Interest Expense (1st Year)		$ 103,500,009	$ 103,500,009	$ 103,500,009	$ 103,500,009	$ 103,500,009	$ 103,500,009
Profit Before Tax		$ 185,929,491	$ 236,354,241	$ 286,778,991	$ 337,203,741	$ 589,327,491	$ 841,451,241
Income Tax	30%	$ 55,778,847	$ 70,906,272	$ 86,033,697	$ 101,161,122	$ 176,798,247	$ 252,435,372
Net Profit		$ 130,150,644	$ 165,447,969	$ 200,745,294	$ 236,042,619	$ 412,529,244	$ 589,015,869
Add: Depreciation		$ 65,150,000	$ 65,150,000	$ 65,150,000	$ 65,150,000	$ 65,150,000	$ 65,150,000
Add: Interest Expense (1st Year)		$ 103,500,009	$ 103,500,009	$ 103,500,009	$ 103,500,009	$ 103,500,009	$ 103,500,009
Cash Flow Before Debt Service (1st Year)		$ 298,800,653	$ 334,097,978	$ 369,395,303	$ 404,692,628	$ 581,179,253	$ 757,665,878
Interest Expense (1st Year)		103,500,009	103,500,009	103,500,009	103,500,009	103,500,009	103,500,009
Principal Payment (1st Year)		$ 72,685,091	$ 72,685,091	$ 72,685,091	$ 72,685,091	$ 72,685,091	$ 72,685,091
Total Debt Service		176,185,100	176,185,100	176,185,100	176,185,100	176,185,100	176,185,100
Debt Coverage		1.70	1.90	2.10	2.30	3.30	4.30
Alternative B - Subsidized Loan at 6% Interest Rate							
Operating Profit		$ 354,579,500	$ 405,004,250	$ 455,429,000	$ 505,853,750	$ 757,977,500	$ 1,010,101,250
Depreciation		65,150,000	65,150,000	65,150,000	65,150,000	65,150,000	65,150,000
Interest Expense (1st Year)		$ 222,159,845	$ 222,159,845	$ 222,159,845	$ 222,159,845	$ 222,159,845	$ 222,159,845
Profit Before Tax		67,269,655	117,694,405	168,119,155	218,543,905	470,667,655	722,791,405
Income Tax	30%	-	-	-	$ 65,563,172	$ 141,200,297	$ 216,837,422
Net Profit		$ 67,269,655	$ 117,694,405	$ 168,119,155	$ 152,980,734	$ 329,467,359	$ 505,953,984
Add: Depreciation		$ 65,150,000	$ 65,150,000	$ 65,150,000	$ 65,150,000	$ 65,150,000	$ 65,150,000
Add: Interest Expense (1st Year)		$ 222,159,845	$ 222,159,845	$ 222,159,845	$ 222,159,845	$ 222,159,845	$ 222,159,845
Cash Flow Before Debt Service (1st Year)		$ 354,579,500	$ 405,004,250	$ 455,429,000	$ 440,290,578	$ 616,777,203	$ 793,263,828
Interest Expense (1st Year)		222,159,845	222,159,845	222,159,845	222,159,845	222,159,845	222,159,845
Principal Payment (1st Year)		$ 45,932,307	$ 45,932,307	$ 45,932,307	$ 45,932,307	$ 45,932,307	$ 45,932,307
Total Debt Service		268,092,152	268,092,152	268,092,152	268,092,152	268,092,152	268,092,152
Debt Coverage		1.32	1.51	1.70	1.64	2.30	2.96

Grapevine Hill
Tunnel Project
Cash Flow Analysis $US

			Utilization of Truck Traffic			
			10%	15%	20%	25%
Traffic Assumptions:						
Truck Traffic (number of trucks per year)	7,300,000		730,000	1,095,000	1,460,000	1,825,000
Passenger Trains			27,375	27,375	27,375	27,375
Revenue Assumptions:						
Revenue per Truck			$ 100	$ 100	$ 100	$ 100
Revenue per Passenger Train			$ 5,000	$ 5,000	$ 5,000	$ 5,000
Revenue:						
Trains:						
Intermodal Trains			$ 73,000,000	$ 109,500,000	$ 146,000,000	$ 182,500,000
Passenger Trains			$ 136,875,000	$ 136,875,000	$ 136,875,000	$ 136,875,000
Total Train Revenue			$ 209,875,000	$ 246,375,000	$ 282,875,000	$ 319,375,000
Truck Stop:						
Fuel	$ 7.50	per trk	$ 5,475,000	$ 8,212,500	$ 10,950,000	$ 13,687,500
Overnight Parking			$ 6,205,000	$ 6,205,000	$ 6,205,000	$ 6,205,000
Food, Showers, etc.			$ 9,125,000	$ 9,125,000	$ 9,125,000	$ 9,125,000
Warehouses			$ 1,920,000	$ 1,920,000	$ 1,920,000	$ 1,920,000
Total Truck Stop Revenue			$ 22,725,000	$ 25,462,500	$ 28,200,000	$ 30,937,500
Total Revenue			$ 232,600,000	$ 271,837,500	$ 311,075,000	$ 350,312,500
Expenses:						
Train:						
Operations			$ 1,600,000	$ 1,600,000	$ 1,600,000	$ 1,600,000
Administration		2.0%	$ 4,197,500	$ 4,927,500	$ 5,657,500	$ 6,387,500
Labor		2.0%	$ 4,197,500	$ 4,927,500	$ 5,657,500	$ 6,387,500
Total Train Expense			$ 9,995,000	$ 11,455,000	$ 12,915,000	$ 14,375,000
Truck Stop:						
Fuel	$ 3.75	per trk	$ 2,737,500	$ 4,106,250	$ 5,475,000	$ 6,843,750
Overnight Parking			$ 620,500	$ 620,500	$ 620,500	$ 620,500
Food, Showers, etc.			$ 6,387,500	$ 6,387,500	$ 6,387,500	$ 6,387,500
Warehouses			$ 192,000	$ 192,000	$ 192,000	$ 192,000
Total Truck Stop Expense			$ 9,937,500	$ 11,306,250	$ 12,675,000	$ 14,043,750
Total Expenses			$ 19,932,500	$ 22,761,250	$ 25,590,000	$ 28,418,750
Operating Profit			**$ 212,667,500**	**$ 249,076,250**	**$ 285,485,000**	**$ 321,893,750**

Grapevine Hill
Tunnel Project
Cash Flow Analysis $US

		Utilization of Truck Traffic			
		10%	15%	20%	25%
Alternative A - Subsidized Loan at 3% Interest Rate					
Operating Profit		$ 212,667,500	$ 249,076,250	$ 285,485,000	$ 321,893,750
Depreciation		$ 65,150,000	$ 65,150,000	$ 65,150,000	$ 65,150,000
Interest Expense (1st Year)		$ 103,500,009	$ 103,500,009	$ 103,500,009	$ 103,500,009
Profit Before Tax		$ 44,017,491	$ 80,426,241	$ 116,834,991	$ 153,243,741
Income Tax	30%	$ 13,205,247	$ 24,127,872	$ 35,050,497	$ 45,973,122
Net Profit		$ 30,812,244	$ 56,298,369	$ 81,784,494	$ 107,270,619
Add: Depreciation		$ 65,150,000	$ 65,150,000	$ 65,150,000	$ 65,150,000
Add: Interest Expense (1st Year)		$ 103,500,009	$ 103,500,009	$ 103,500,009	$ 103,500,009
Cash Flow Before Debt Service (1st Year)		$ 199,462,253	$ 224,948,378	$ 250,434,503	$ 275,920,628
Interest Expense (1st Year)		103,500,009	103,500,009	103,500,009	103,500,009
Principal Payment (1st Year)		$ 72,685,091	$ 72,685,091	$ 72,685,091	$ 72,685,091
Total Debt Service		176,185,100	176,185,100	176,185,100	176,185,100
Debt Coverage		1.13	1.28	1.42	1.57
Alternative B - Subsidized Loan at 6% Interest Rate					
Operating Profit		$ 212,667,500	$ 249,076,250	$ 285,485,000	$ 321,893,750
Depreciation		65,150,000	65,150,000	65,150,000	65,150,000
Interest Expense (1st Year)		$ 222,159,845	$ 222,159,845	$ 222,159,845	$ 222,159,845
Profit Before Tax		(74,642,345)	(38,233,595)	(1,824,845)	34,583,905
Income Tax	30%	-	-	-	$ 10,375,172
Net Profit		$ (74,642,345)	$ (38,233,595)	$ (1,824,845)	$ 24,208,734
Add: Depreciation		$ 65,150,000	$ 65,150,000	$ 65,150,000	$ 65,150,000
Add: Interest Expense (1st Year)		$ 222,159,845	$ 222,159,845	$ 222,159,845	$ 222,159,845
Cash Flow Before Debt Service (1st Year)		$ 212,667,500	$ 249,076,250	$ 285,485,000	$ 311,518,578
Interest Expense (1st Year)		222,159,845	222,159,845	222,159,845	222,159,845
Principal Payment (1st Year)		$ 45,932,307	$ 45,932,307	$ 45,932,307	$ 45,932,307
Total Debt Service		268,092,152	268,092,152	268,092,152	268,092,152
Debt Coverage		0.79	0.93	1.06	1.16

Grapevine Hill
Tunnel Project
Loan Amortization

Loan Amount	$ 3,234,500,000
Amortization	30 years
Interest Rate	3%
Payments	Quarterly
Number of payments	120

Payment	Interest	Principal	Total Payment	Principal Balance
				$ 3,234,500,000
Capitalized Construction Interest				$ 242,587,500
Amortized Loan Amount				$ 3,477,087,500
1	$ 26,078,156	$ 17,968,119	$ 44,046,275	$ 3,459,119,381
2	$ 25,943,395	$ 18,102,880	$ 44,046,275	$ 3,441,016,502
3	$ 25,807,624	$ 18,238,651	$ 44,046,275	$ 3,422,777,851
4	$ 25,670,834	$ 18,375,441	$ 44,046,275	$ 3,404,402,409
1st Year	$ 103,500,009	$ 72,685,091	$ 176,185,100	
5	$ 25,533,018	$ 18,513,257	$ 44,046,275	$ 3,385,889,153
6	$ 25,394,169	$ 18,652,106	$ 44,046,275	$ 3,367,237,046
7	$ 25,254,278	$ 18,791,997	$ 44,046,275	$ 3,348,445,049
8	$ 25,113,338	$ 18,932,937	$ 44,046,275	$ 3,329,512,112
2nd Year	$ 101,294,802	$ 74,890,297	$ 176,185,100	
9	$ 24,971,341	$ 19,074,934	$ 44,046,275	$ 3,310,437,178
10	$ 24,828,279	$ 19,217,996	$ 44,046,275	$ 3,291,219,182
11	$ 24,684,144	$ 19,362,131	$ 44,046,275	$ 3,271,857,051
12	$ 24,538,928	$ 19,507,347	$ 44,046,275	$ 3,252,349,704
3rd Year	$ 99,022,691	$ 77,162,408	$ 176,185,100	
13	$ 24,392,623	$ 19,653,652	$ 44,046,275	$ 3,232,696,052
14	$ 24,245,220	$ 19,801,055	$ 44,046,275	$ 3,212,894,997
15	$ 24,096,712	$ 19,949,562	$ 44,046,275	$ 3,192,945,434
16	$ 23,947,091	$ 20,099,184	$ 44,046,275	$ 3,172,846,250
4th Year	$ 96,681,646	$ 79,503,453	$ 176,185,100	
17	$ 23,796,347	$ 20,249,928	$ 44,046,275	$ 3,152,596,322
18	$ 23,644,472	$ 20,401,803	$ 44,046,275	$ 3,132,194,520
19	$ 23,491,459	$ 20,554,816	$ 44,046,275	$ 3,111,639,704
20	$ 23,337,298	$ 20,708,977	$ 44,046,275	$ 3,090,930,726
5th Year	$ 94,269,576	$ 81,915,524	$ 176,185,100	
21	$ 23,181,980	$ 20,864,295	$ 44,046,275	$ 3,070,066,432
22	$ 23,025,498	$ 21,020,777	$ 44,046,275	$ 3,049,045,655
23	$ 22,867,842	$ 21,178,433	$ 44,046,275	$ 3,027,867,223
24	$ 22,709,004	$ 21,337,271	$ 44,046,275	$ 3,006,529,952
6th Year	$ 91,784,325	$ 84,400,775	$ 176,185,100	

Payment	Interest	Principal	Total Payment	Principal Balance
25	$ 22,548,975	$ 21,497,300	$ 44,046,275	$ 2,985,032,652
26	$ 22,387,745	$ 21,658,530	$ 44,046,275	$ 2,963,374,122
27	$ 22,225,306	$ 21,820,969	$ 44,046,275	$ 2,941,553,153
28	$ 22,061,649	$ 21,984,626	$ 44,046,275	$ 2,919,568,526
7th Year	$ 89,223,674	$ 86,961,426	$ 176,185,100	
29	$ 21,896,764	$ 22,149,511	$ 44,046,275	$ 2,897,419,015
30	$ 21,730,643	$ 22,315,632	$ 44,046,275	$ 2,875,103,383
31	$ 21,563,275	$ 22,483,000	$ 44,046,275	$ 2,852,620,383
32	$ 21,394,653	$ 22,651,622	$ 44,046,275	$ 2,829,968,761
8th Year	$ 86,585,335	$ 89,599,765	$ 176,185,100	
33	$ 21,224,766	$ 22,821,509	$ 44,046,275	$ 2,807,147,252
34	$ 21,053,604	$ 22,992,671	$ 44,046,275	$ 2,784,154,581
35	$ 20,881,159	$ 23,165,116	$ 44,046,275	$ 2,760,989,466
36	$ 20,707,421	$ 23,338,854	$ 44,046,275	$ 2,737,650,612
9th Year	$ 83,866,950	$ 92,318,149	$ 176,185,100	
37	$ 20,532,380	$ 23,513,895	$ 44,046,275	$ 2,714,136,717
38	$ 20,356,025	$ 23,690,250	$ 44,046,275	$ 2,690,446,467
39	$ 20,178,349	$ 23,867,926	$ 44,046,275	$ 2,666,578,541
40	$ 19,999,339	$ 24,046,936	$ 44,046,275	$ 2,642,531,605
10th Year	$ 81,066,093	$ 95,119,007	$ 176,185,100	
41	$ 19,818,987	$ 24,227,288	$ 44,046,275	$ 2,618,304,317
42	$ 19,637,282	$ 24,408,993	$ 44,046,275	$ 2,593,895,324
43	$ 19,454,215	$ 24,592,060	$ 44,046,275	$ 2,569,303,264
44	$ 19,269,774	$ 24,776,500	$ 44,046,275	$ 2,544,526,764
11th Year	$ 78,180,259	$ 98,004,841	$ 176,185,100	
45	$ 19,083,951	$ 24,962,324	$ 44,046,275	$ 2,519,564,439
46	$ 18,896,733	$ 25,149,542	$ 44,046,275	$ 2,494,414,898
47	$ 18,708,112	$ 25,338,163	$ 44,046,275	$ 2,469,076,735
48	$ 18,518,076	$ 25,528,199	$ 44,046,275	$ 2,443,548,535
12th Year	$ 75,206,871	$ 100,978,229	$ 176,185,100	
49	$ 18,326,614	$ 25,719,661	$ 44,046,275	$ 2,417,828,874
50	$ 18,133,717	$ 25,912,558	$ 44,046,275	$ 2,391,916,316
51	$ 17,939,372	$ 26,106,903	$ 44,046,275	$ 2,365,809,413
52	$ 17,743,571	$ 26,302,704	$ 44,046,275	$ 2,339,506,709
13th Year	$ 72,143,274	$ 104,041,826	$ 176,185,100	
53	$ 17,546,300	$ 26,499,975	$ 44,046,275	$ 2,313,006,734
54	$ 17,347,551	$ 26,698,724	$ 44,046,275	$ 2,286,308,010
55	$ 17,147,310	$ 26,898,965	$ 44,046,275	$ 2,259,409,045
56	$ 16,945,568	$ 27,100,707	$ 44,046,275	$ 2,232,308,338
14th Year	$ 68,986,729	$ 107,198,371	$ 176,185,100	
57	$ 16,742,313	$ 27,303,962	$ 44,046,275	$ 2,205,004,375
58	$ 16,537,533	$ 27,508,742	$ 44,046,275	$ 2,177,495,633
59	$ 16,331,217	$ 27,715,058	$ 44,046,275	$ 2,149,780,576
60	$ 16,123,354	$ 27,922,921	$ 44,046,275	$ 2,121,857,655
15th Year	$ 65,734,417	$ 110,450,683	$ 176,185,100	

Payment	Interest	Principal	Total Payment	Principal Balance
61	$ 15,913,932	$ 28,132,343	$ 44,046,275	$ 2,093,725,312
62	$ 15,702,940	$ 28,343,335	$ 44,046,275	$ 2,065,381,977
63	$ 15,490,365	$ 28,555,910	$ 44,046,275	$ 2,036,826,067
64	$ 15,276,196	$ 28,770,079	$ 44,046,275	$ 2,008,055,988
16th Year	$ 62,383,433	$ 113,801,667	$ 176,185,100	
65	$ 15,060,420	$ 28,985,855	$ 44,046,275	$ 1,979,070,133
66	$ 14,843,026	$ 29,203,249	$ 44,046,275	$ 1,949,866,884
67	$ 14,624,002	$ 29,422,273	$ 44,046,275	$ 1,920,444,610
68	$ 14,403,335	$ 29,642,940	$ 44,046,275	$ 1,890,801,670
17th Year	$ 58,930,782	$ 117,254,318	$ 176,185,100	
69	$ 14,181,013	$ 29,865,262	$ 44,046,275	$ 1,860,936,408
70	$ 13,957,023	$ 30,089,252	$ 44,046,275	$ 1,830,847,156
71	$ 13,731,354	$ 30,314,921	$ 44,046,275	$ 1,800,532,234
72	$ 13,503,992	$ 30,542,283	$ 44,046,275	$ 1,769,989,951
18th Year	$ 55,373,381	$ 120,811,719	$ 176,185,100	
73	$ 13,274,925	$ 30,771,350	$ 44,046,275	$ 1,739,218,601
74	$ 13,044,140	$ 31,002,135	$ 44,046,275	$ 1,708,216,465
75	$ 12,811,623	$ 31,234,651	$ 44,046,275	$ 1,676,981,814
76	$ 12,577,364	$ 31,468,911	$ 44,046,275	$ 1,645,512,903
19th Year	$ 51,708,051	$ 124,477,049	$ 176,185,100	
77	$ 12,341,347	$ 31,704,928	$ 44,046,275	$ 1,613,807,974
78	$ 12,103,560	$ 31,942,715	$ 44,046,275	$ 1,581,865,259
79	$ 11,863,989	$ 32,182,286	$ 44,046,275	$ 1,549,682,974
80	$ 11,622,622	$ 32,423,653	$ 44,046,275	$ 1,517,259,321
20th year	$ 47,931,518	$ 128,253,581	$ 176,185,100	
81	$ 11,379,445	$ 32,666,830	$ 44,046,275	$ 1,484,592,491
82	$ 11,134,444	$ 32,911,831	$ 44,046,275	$ 1,451,680,660
83	$ 10,887,605	$ 33,158,670	$ 44,046,275	$ 1,418,521,990
84	$ 10,638,915	$ 33,407,360	$ 44,046,275	$ 1,385,114,630
21st Year	$ 44,040,408	$ 132,144,691	$ 176,185,100	
85	$ 10,388,360	$ 33,657,915	$ 44,046,275	$ 1,351,456,715
86	$ 10,135,925	$ 33,910,350	$ 44,046,275	$ 1,317,546,365
87	$ 9,881,598	$ 34,164,677	$ 44,046,275	$ 1,283,381,688
88	$ 9,625,363	$ 34,420,912	$ 44,046,275	$ 1,248,960,775
22nd Year	$ 40,031,245	$ 136,153,854	$ 176,185,100	
89	$ 9,367,206	$ 34,679,069	$ 44,046,275	$ 1,214,281,706
90	$ 9,107,113	$ 34,939,162	$ 44,046,275	$ 1,179,342,544
91	$ 8,845,069	$ 35,201,206	$ 44,046,275	$ 1,144,141,338
92	$ 8,581,060	$ 35,465,215	$ 44,046,275	$ 1,108,676,123
23rd Year	$ 35,900,448	$ 140,284,652	$ 176,185,100	
93	$ 8,315,071	$ 35,731,204	$ 44,046,275	$ 1,072,944,919
94	$ 8,047,087	$ 35,999,188	$ 44,046,275	$ 1,036,945,731
95	$ 7,777,093	$ 36,269,182	$ 44,046,275	$ 1,000,676,549
96	$ 7,505,074	$ 36,541,201	$ 44,046,275	$ 964,135,349
24th Year	$ 31,644,325	$ 144,540,775	$ 176,185,100	

Payment	Interest	Principal	Total Payment	Principal Balance
97	$ 7,231,015	$ 36,815,260	$ 44,046,275	$ 927,320,089
98	$ 6,954,901	$ 37,091,374	$ 44,046,275	$ 890,228,714
99	$ 6,676,715	$ 37,369,560	$ 44,046,275	$ 852,859,155
100	$ 6,396,444	$ 37,649,831	$ 44,046,275	$ 815,209,324
25th Year	$ 27,259,075	$ 148,926,025	$ 176,185,100	
101	$ 6,114,070	$ 37,932,205	$ 44,046,275	$ 777,277,119
102	$ 5,829,578	$ 38,216,697	$ 44,046,275	$ 739,060,422
103	$ 5,542,953	$ 38,503,322	$ 44,046,275	$ 700,557,100
104	$ 5,254,178	$ 38,792,097	$ 44,046,275	$ 661,765,003
26th Year	$ 22,740,780	$ 153,444,320	$ 176,185,100	
105	$ 4,963,238	$ 39,083,037	$ 44,046,275	$ 622,681,966
106	$ 4,670,115	$ 39,376,160	$ 44,046,275	$ 583,305,806
107	$ 4,374,794	$ 39,671,481	$ 44,046,275	$ 543,634,324
108	$ 4,077,257	$ 39,969,018	$ 44,046,275	$ 503,665,307
27th Year	$ 18,085,403	$ 158,099,697	$ 176,185,100	
109	$ 3,777,490	$ 40,268,785	$ 44,046,275	$ 463,396,522
110	$ 3,475,474	$ 40,570,801	$ 44,046,275	$ 422,825,721
111	$ 3,171,193	$ 40,875,082	$ 44,046,275	$ 381,950,639
112	$ 2,864,630	$ 41,181,645	$ 44,046,275	$ 340,768,994
28th Year	$ 13,288,786	$ 162,896,313	$ 176,185,100	
113	$ 2,555,767	$ 41,490,507	$ 44,046,275	$ 299,278,486
114	$ 2,244,589	$ 41,801,686	$ 44,046,275	$ 257,476,800
115	$ 1,931,076	$ 42,115,199	$ 44,046,275	$ 215,361,601
116	$ 1,615,212	$ 42,431,063	$ 44,046,275	$ 172,930,538
29th Year	$ 8,346,644	$ 167,838,456	$ 176,185,100	
117	$ 1,296,979	$ 42,749,296	$ 44,046,275	$ 130,181,242
118	$ 976,359	$ 43,069,916	$ 44,046,275	$ 87,111,326
119	$ 653,335	$ 43,392,940	$ 44,046,275	$ 43,718,386
120	$ 327,888	$ 43,718,387	$ 44,046,275	$ (1)
30th Year	$ 3,254,561	$ 172,930,539	$ 176,185,100	

Grapevine Hill
Tunnel Project
Loan Amortization

Loan Amount	$ 3,234,500,000
Amortization	30 years
Interest Rate	6%
Payments	Quarterly
Number of payments	120

Payment	Interest	Principal	Total Payment	Principal Balance
				$ 3,234,500,000
Capitalized Construction Interest				$ 485,175,000
Amortized Loan Amount				$ 3,719,675,000
1	$ 55,795,125	$ 11,227,913	$ 67,023,038	$ 3,708,447,087
2	$ 55,626,706	$ 11,396,332	$ 67,023,038	$ 3,697,050,755
3	$ 55,455,761	$ 11,567,277	$ 67,023,038	$ 3,685,483,479
4	$ 55,282,252	$ 11,740,786	$ 67,023,038	$ 3,673,742,693
1st Year	$ 222,159,845	$ 45,932,307	$ 268,092,152	
5	$ 55,106,140	$ 11,916,898	$ 67,023,038	$ 3,661,825,795
6	$ 54,927,387	$ 12,095,651	$ 67,023,038	$ 3,649,730,144
7	$ 54,745,952	$ 12,277,086	$ 67,023,038	$ 3,637,453,058
8	$ 54,561,796	$ 12,461,242	$ 67,023,038	$ 3,624,991,816
2nd Year	$ 219,341,275	$ 48,750,877	$ 268,092,152	
9	$ 54,374,877	$ 12,648,161	$ 67,023,038	$ 3,612,343,655
10	$ 54,185,155	$ 12,837,883	$ 67,023,038	$ 3,599,505,772
11	$ 53,992,587	$ 13,030,451	$ 67,023,038	$ 3,586,475,321
12	$ 53,797,130	$ 13,225,908	$ 67,023,038	$ 3,573,249,412
3rd Year	$ 216,349,748	$ 51,742,404	$ 268,092,152	
13	$ 53,598,741	$ 13,424,297	$ 67,023,038	$ 3,559,825,116
14	$ 53,397,377	$ 13,625,661	$ 67,023,038	$ 3,546,199,454
15	$ 53,192,992	$ 13,830,046	$ 67,023,038	$ 3,532,369,408
16	$ 52,985,541	$ 14,037,497	$ 67,023,038	$ 3,518,331,911
4th Year	$ 213,174,651	$ 54,917,501	$ 268,092,152	
17	$ 52,774,979	$ 14,248,059	$ 67,023,038	$ 3,504,083,852
18	$ 52,561,258	$ 14,461,780	$ 67,023,038	$ 3,489,622,072
19	$ 52,344,331	$ 14,678,707	$ 67,023,038	$ 3,474,943,365
20	$ 52,124,150	$ 14,898,888	$ 67,023,038	$ 3,460,044,477
5th Year	$ 209,804,718	$ 58,287,434	$ 268,092,152	
21	$ 51,900,667	$ 15,122,371	$ 67,023,038	$ 3,444,922,106
22	$ 51,673,832	$ 15,349,206	$ 67,023,038	$ 3,429,572,900
23	$ 51,443,593	$ 15,579,445	$ 67,023,038	$ 3,413,993,455
24	$ 51,209,902	$ 15,813,136	$ 67,023,038	$ 3,398,180,319
6th Year	$ 206,227,994	$ 61,864,158	$ 268,092,152	

Payment	Interest	Principal	Total Payment	Principal Balance
25	$ 50,972,705	$ 16,050,333	$ 67,023,038	$ 3,382,129,986
26	$ 50,731,950	$ 16,291,088	$ 67,023,038	$ 3,365,838,898
27	$ 50,487,583	$ 16,535,455	$ 67,023,038	$ 3,349,303,443
28	$ 50,239,552	$ 16,783,486	$ 67,023,038	$ 3,332,519,957
7th Year	$ 202,431,790	$ 65,660,362	$ 268,092,152	
29	$ 49,987,799	$ 17,035,239	$ 67,023,038	$ 3,315,484,718
30	$ 49,732,271	$ 17,290,767	$ 67,023,038	$ 3,298,193,951
31	$ 49,472,909	$ 17,550,129	$ 67,023,038	$ 3,280,643,822
32	$ 49,209,657	$ 17,813,381	$ 67,023,038	$ 3,262,830,441
8th Year	$ 198,402,637	$ 69,689,515	$ 268,092,152	
33	$ 48,942,457	$ 18,080,581	$ 67,023,038	$ 3,244,749,860
34	$ 48,671,248	$ 18,351,790	$ 67,023,038	$ 3,226,398,070
35	$ 48,395,971	$ 18,627,067	$ 67,023,038	$ 3,207,771,003
36	$ 48,116,565	$ 18,906,473	$ 67,023,038	$ 3,188,864,530
9th Year	$ 194,126,241	$ 73,965,911	$ 268,092,152	
37	$ 47,832,968	$ 19,190,070	$ 67,023,038	$ 3,169,674,460
38	$ 47,545,117	$ 19,477,921	$ 67,023,038	$ 3,150,196,539
39	$ 47,252,948	$ 19,770,090	$ 67,023,038	$ 3,130,426,449
40	$ 46,956,397	$ 20,066,641	$ 67,023,038	$ 3,110,359,807
10th Year	$ 189,587,430	$ 78,504,722	$ 268,092,152	
41	$ 46,655,397	$ 20,367,641	$ 67,023,038	$ 3,089,992,166
42	$ 46,349,882	$ 20,673,156	$ 67,023,038	$ 3,069,319,011
43	$ 46,039,785	$ 20,983,253	$ 67,023,038	$ 3,048,335,758
44	$ 45,725,036	$ 21,298,002	$ 67,023,038	$ 3,027,037,756
11th Year	$ 184,770,101	$ 83,322,051	$ 268,092,152	
45	$ 45,405,566	$ 21,617,472	$ 67,023,038	$ 3,005,420,285
46	$ 45,081,304	$ 21,941,734	$ 67,023,038	$ 2,983,478,551
47	$ 44,752,178	$ 22,270,860	$ 67,023,038	$ 2,961,207,691
48	$ 44,418,115	$ 22,604,923	$ 67,023,038	$ 2,938,602,769
12th Year	$ 179,657,164	$ 88,434,988	$ 268,092,152	
49	$ 44,079,042	$ 22,943,996	$ 67,023,038	$ 2,915,658,772
50	$ 43,734,882	$ 23,288,156	$ 67,023,038	$ 2,892,370,616
51	$ 43,385,559	$ 23,637,479	$ 67,023,038	$ 2,868,733,137
52	$ 43,030,997	$ 23,992,041	$ 67,023,038	$ 2,844,741,096
13th Year	$ 174,230,479	$ 93,861,673	$ 268,092,152	
53	$ 42,671,116	$ 24,351,922	$ 67,023,038	$ 2,820,389,174
54	$ 42,305,838	$ 24,717,200	$ 67,023,038	$ 2,795,671,974
55	$ 41,935,080	$ 25,087,958	$ 67,023,038	$ 2,770,584,016
56	$ 41,558,760	$ 25,464,278	$ 67,023,038	$ 2,745,119,738
14th Year	$ 168,470,794	$ 99,621,358	$ 268,092,152	
57	$ 41,176,796	$ 25,846,242	$ 67,023,038	$ 2,719,273,496
58	$ 40,789,102	$ 26,233,936	$ 67,023,038	$ 2,693,039,560
59	$ 40,395,593	$ 26,627,445	$ 67,023,038	$ 2,666,412,116
60	$ 39,996,182	$ 27,026,856	$ 67,023,038	$ 2,639,385,259
15th Year	$ 162,357,674	$ 105,734,478	$ 268,092,152	

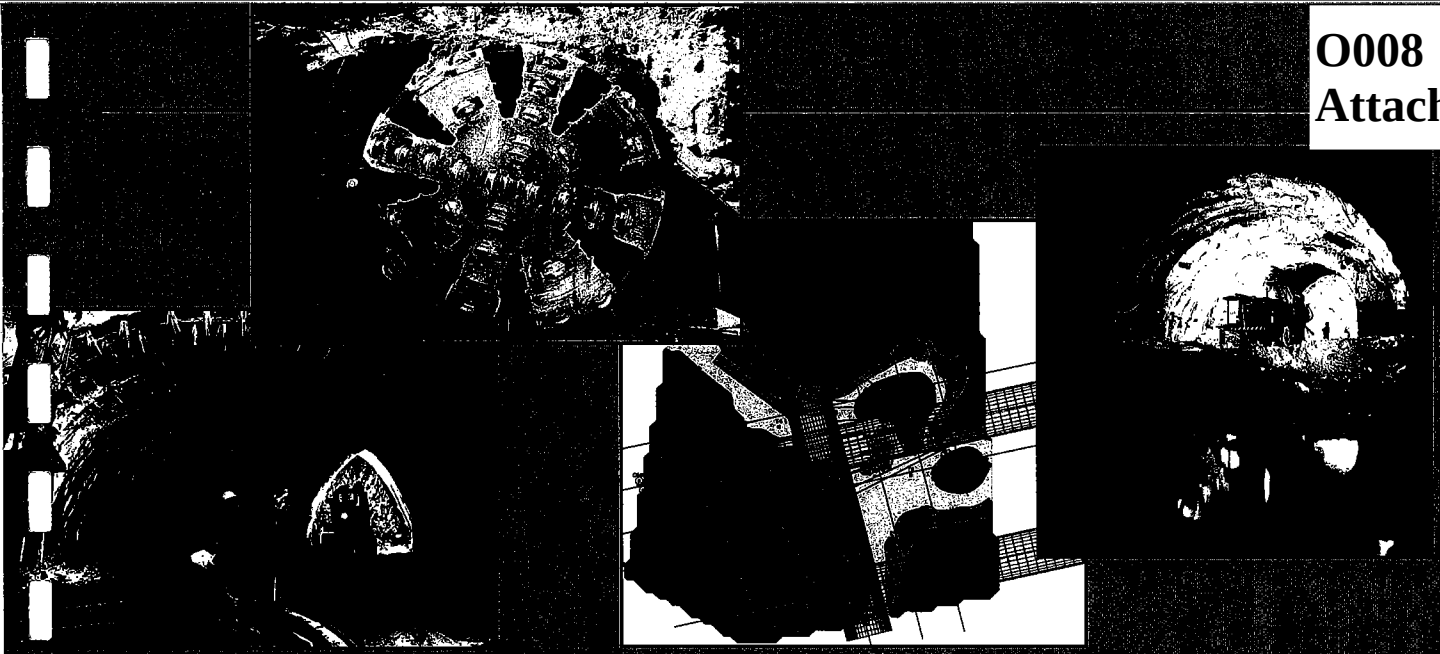
Payment	Interest	Principal	Total Payment	Principal Balance
61	$ 39,590,779	$ 27,432,259	$ 67,023,038	$ 2,611,953,000
62	$ 39,179,295	$ 27,843,743	$ 67,023,038	$ 2,584,109,257
63	$ 38,761,639	$ 28,261,399	$ 67,023,038	$ 2,555,847,858
64	$ 38,337,718	$ 28,685,320	$ 67,023,038	$ 2,527,162,538
16th Year	$ 155,869,431	$ 112,222,721	$ 268,092,152	
65	$ 37,907,438	$ 29,115,600	$ 67,023,038	$ 2,498,046,938
66	$ 37,470,704	$ 29,552,334	$ 67,023,038	$ 2,468,494,604
67	$ 37,027,419	$ 29,995,619	$ 67,023,038	$ 2,438,498,985
68	$ 36,577,485	$ 30,445,553	$ 67,023,038	$ 2,408,053,432
17th Year	$ 148,983,046	$ 119,109,106	$ 268,092,152	
69	$ 36,120,801	$ 30,902,237	$ 67,023,038	$ 2,377,151,195
70	$ 35,657,268	$ 31,365,770	$ 67,023,038	$ 2,345,785,425
71	$ 35,186,781	$ 31,836,257	$ 67,023,038	$ 2,313,949,168
72	$ 34,709,238	$ 32,313,800	$ 67,023,038	$ 2,281,635,368
18th Year	$ 141,674,088	$ 126,418,064	$ 268,092,152	
73	$ 34,224,531	$ 32,798,508	$ 67,023,038	$ 2,248,836,860
74	$ 33,732,553	$ 33,290,485	$ 67,023,038	$ 2,215,546,375
75	$ 33,233,196	$ 33,789,842	$ 67,023,038	$ 2,181,756,533
76	$ 32,726,348	$ 34,296,690	$ 67,023,038	$ 2,147,459,843
19th Year	$ 133,916,627	$ 134,175,525	$ 268,092,152	
77	$ 32,211,898	$ 34,811,140	$ 67,023,038	$ 2,112,648,703
78	$ 31,689,731	$ 35,333,307	$ 67,023,038	$ 2,077,315,395
79	$ 31,159,731	$ 35,863,307	$ 67,023,038	$ 2,041,452,088
80	$ 30,621,781	$ 36,401,257	$ 67,023,038	$ 2,005,050,831
20th year	$ 125,683,140	$ 142,409,012	$ 268,092,152	
81	$ 30,075,762	$ 36,947,276	$ 67,023,038	$ 1,968,103,556
82	$ 29,521,553	$ 37,501,485	$ 67,023,038	$ 1,930,602,071
83	$ 28,959,031	$ 38,064,007	$ 67,023,038	$ 1,892,538,064
84	$ 28,388,071	$ 38,634,967	$ 67,023,038	$ 1,853,903,097
21st Year	$ 116,944,418	$ 151,147,734	$ 268,092,152	
85	$ 27,808,546	$ 39,214,492	$ 67,023,038	$ 1,814,688,605
86	$ 27,220,329	$ 39,802,709	$ 67,023,038	$ 1,774,885,897
87	$ 26,623,288	$ 40,399,750	$ 67,023,038	$ 1,734,486,147
88	$ 26,017,292	$ 41,005,746	$ 67,023,038	$ 1,693,480,401
22nd Year	$ 107,669,456	$ 160,422,696	$ 268,092,152	
89	$ 25,402,206	$ 41,620,832	$ 67,023,038	$ 1,651,859,569
90	$ 24,777,894	$ 42,245,144	$ 67,023,038	$ 1,609,614,425
91	$ 24,144,216	$ 42,878,822	$ 67,023,038	$ 1,566,735,603
92	$ 23,501,034	$ 43,522,004	$ 67,023,038	$ 1,523,213,599
23rd Year	$ 97,825,350	$ 170,266,802	$ 268,092,152	
93	$ 22,848,204	$ 44,174,834	$ 67,023,038	$ 1,479,038,765
94	$ 22,185,581	$ 44,837,457	$ 67,023,038	$ 1,434,201,308
95	$ 21,513,020	$ 45,510,018	$ 67,023,038	$ 1,388,691,290
96	$ 20,830,369	$ 46,192,669	$ 67,023,038	$ 1,342,498,621
24th Year	$ 87,377,174	$ 180,714,978	$ 268,092,152	

Payment	Interest	Principal	Total Payment	Principal Balance
97	$ 20,137,479	$ 46,885,559	$ 67,023,038	$ 1,295,613,063
98	$ 19,434,196	$ 47,588,842	$ 67,023,038	$ 1,248,024,221
99	$ 18,720,363	$ 48,302,675	$ 67,023,038	$ 1,199,721,546
100	$ 17,995,823	$ 49,027,215	$ 67,023,038	$ 1,150,694,331
25th Year	$ 76,287,862	$ 191,804,290	$ 268,092,152	
101	$ 17,260,415	$ 49,762,623	$ 67,023,038	$ 1,100,931,708
102	$ 16,513,976	$ 50,509,062	$ 67,023,038	$ 1,050,422,646
103	$ 15,756,340	$ 51,266,698	$ 67,023,038	$ 999,155,947
104	$ 14,987,339	$ 52,035,699	$ 67,023,038	$ 947,120,248
26th Year	$ 64,518,069	$ 203,574,083	$ 268,092,152	
105	$ 14,206,804	$ 52,816,234	$ 67,023,038	$ 894,304,014
106	$ 13,414,560	$ 53,608,478	$ 67,023,038	$ 840,695,536
107	$ 12,610,433	$ 54,412,605	$ 67,023,038	$ 786,282,931
108	$ 11,794,244	$ 55,228,794	$ 67,023,038	$ 731,054,137
27th Year	$ 52,026,041	$ 216,066,111	$ 268,092,152	
109	$ 10,965,812	$ 56,057,226	$ 67,023,038	$ 674,996,911
110	$ 10,124,954	$ 56,898,084	$ 67,023,038	$ 618,098,827
111	$ 9,271,482	$ 57,751,556	$ 67,023,038	$ 560,347,271
112	$ 8,405,209	$ 58,617,829	$ 67,023,038	$ 501,729,443
28th Year	$ 38,767,457	$ 229,324,695	$ 268,092,152	
113	$ 7,525,942	$ 59,497,096	$ 67,023,038	$ 442,232,346
114	$ 6,633,485	$ 60,389,553	$ 67,023,038	$ 381,842,793
115	$ 5,727,642	$ 61,295,396	$ 67,023,038	$ 320,547,397
116	$ 4,808,211	$ 62,214,827	$ 67,023,038	$ 258,332,570
29th Year	$ 24,695,280	$ 243,396,872	$ 268,092,152	
117	$ 3,874,989	$ 63,148,049	$ 67,023,038	$ 195,184,521
118	$ 2,927,768	$ 64,095,270	$ 67,023,038	$ 131,089,250
119	$ 1,966,339	$ 65,056,699	$ 67,023,038	$ 66,032,551
120	$ 990,488	$ 66,032,550	$ 67,023,038	$ 1
30th Year	$ 9,759,583	$ 258,332,569	$ 268,092,152	

Grapevine Hill
Tunnel Project
Depreciation

Year 1	Cost	Depreciation Rate (years)	Annual Depreciation
Tunnel	$3,200,000,000	50	$ 64,000,000
Two Intermodals	$ 34,500,000	30	$ 1,150,000
Total	$3,234,500,000		$ 65,150,000

O008
Attachment 4



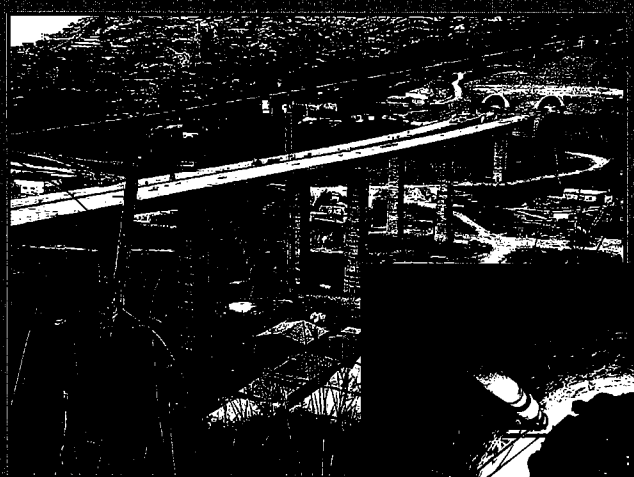
FINAL REPORT

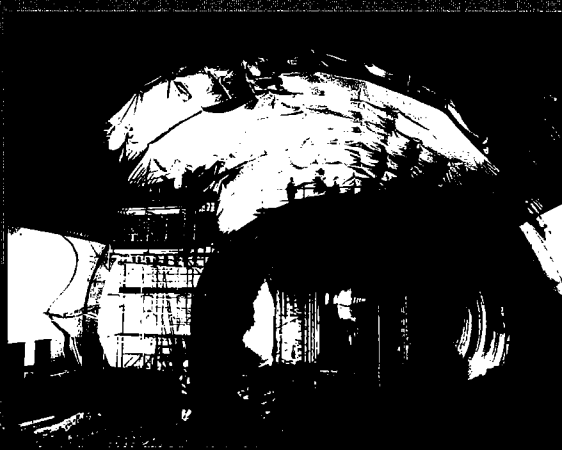
Comparative Analysis of Tunnel Construction Times, Costs and Risks Associated with the Choice of High Speed Rail Tunneling Alignment between Los Angeles and Bakersfield

Submitted to the City of Palmdale — January 31, 2008

TRANSMETRICS
Engineering & Construction Management

GEODATA



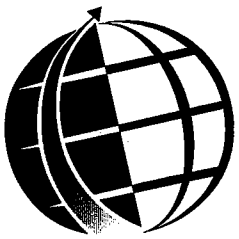


TRANSMETRICS, INC. is a civil engineering firm providing engineering, transportation planning, and construction management services to public and private sector clients. In business since 1982, TRANSMETRICS primarily serves the transportation industry. However, in the past ten years, TRANSMETRICS has expanded its services to include major private and public projects such as educational, medical, and municipal facilities, and the design and relocation of interstate utilities.

TRANSMETRICS offers a wide range of construction management services. Our engineers have the experience to lead a project from the planning and design stage to construction in an efficient and cost effective manner.

Because of its diversified workload and clientele, TRANSMETRICS actively participates in a variety of industry organizations which include:

- American Railway Engineering and Maintenance Association (AREMA)
- American Public Transportation Association (APTA)
- American Society of Civil Engineers (ASCE)
- International Association of Public Transport (UITP)
- American Public Works Association (APWA)
- National Society of Professional Engineers (NSPE)



TRANSMETRICS
Engineering & Construction Management

Transforming ideas into projects and monitoring them until completion: this is our daily task. During more than 16 years activity in the field of geo-engineering we have intensified and diversified our competence, following a strategy of multi-disciplinary growth.

Geodata is an independent geo-engineering company which, since it was founded in 1984, has grown and developed in Italy and throughout the world. Geodata employs more than one hundred professionals who specialize in geo-engineering and subsurface projects. Their skills and extensive experience has made Geodata S.p.A. one of the most respected names in the tunneling industry worldwide.

Geodata works with construction companies and public or private authorities in planning subsurface works and in various sectors of ground engineering. Geo-engineering is our core business; it is our specialization and our strength. Geodata is in a position to supervise this work throughout the specific stages: from preliminary surveys and territorial planning to design and from the optimization of the conventional and mechanized construction techniques to monitoring of the construction progress.

Geodata management has been an active participant in the International Tunneling Association where they present various reports and lead workshop discussions. Its key advisor, *Sebastiano Pelizza* served as President of the International Tunneling Association from 1995-1998.

GEODATA

TRANSMETRICS

2155 South Bascom Avenue, Suite 214
Campbell, California 95008
Phone: 408.371.6800 / Fax: 408.371.6900

January 31, 2003

Mr. Stephen H. Williams, Director
City of Palmdale, Department of Public Works
38250 Sierra Highway
Palmdale, CA 93550

Subject: Final Report: Comparative Analysis of the Tunnel Construction Times, Costs, and Risks associated with two alignments for the High Speed Rail crossing of the Tehachapi Mountain Range between Los Angeles to Bakersfield

Dear Mr. Williams:

Transmetrics/Geodata having completed the subject analysis, is pleased to submit its final report to the City of Palmdale.

This report outlines the geologic challenges involved in the two tunneling options under consideration by the California High Speed Rail Authority. It is intended to assist everyone involved in a decision making role, to consider all the risks and costs inherent in the selection of one alignment over the other.

Prior to the start of the analysis, the study team members made a site visit, obtained extensive mapping and documentation from the U.S. Geological Survey and the California Geologic Survey, and held a teleconference with the program manager retained by the California High Speed Rail Authority.

On behalf of the study team, I would like to thank you and your staff, all the individuals and agencies contacted, and the consultants and staff of the California High Speed Rail Authority for your cooperation and assistance during the conduct of our work.

We look forward to working with you and your staff in the weeks to come and will respond to any questions regarding the analysis.

Very truly yours,

TRANSMETRICS, INC.

Jack Ybarra
President